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SOCIOLOGICAL DETERMINATION OF OBJECTIVES IN EDUCATION

SOCIOLOGICAL DETERMINATION OF OBJECTIVES IN EDUCATION

BY

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PHILADELPHIA AND LONDON
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PREFACE

MORE education and better education must be provided by the people and for the people if the aims of democracy are to be realized in a populous and forward striving world—this has been the verdict of all thoughtful persons trying to read the riddles of war and of peace propounded by our age.

But education is not an easily standardized commodity like wheat or coal or gold. Its varieties are numberless, and their gradations of worth as yet undetermined. More education—yes, if it is of right kinds; better education—what is it, and how shall it be known? More education, always increasing in cost—for whose advantage? Better education—better for the individual or for the "small" group to which the small-souled man wholly gives himself, or for the state and humanity to which the true citizen dedicates his best efforts?

What, in fine, should be the objectives or purposes—not of education in the abstract, which is a problem for metaphysicians—but of each of hundreds of varieties of education as practicable of attainment with scores of types of potential citizens? And how are these types of potential citizens to be distinguished by virtue of native inheritance, modifying environment and probable prospects? Here lie very many problems for future statesmen, sociologists and educators.

The actual objectives of much of our education still rest largely on faiths and beliefs—often hardened into dogmas as to educational values, and the *ex-parte* creeds of subject-matter specialists. College entrance requirements, framed with little appreciation of the needs of

democratic secondary education and with even less knowledge of the educational potentialities of adolescents, still constitute the only clearly defined objectives of our public high schools, apart from certain half-hearted commercial courses.

Two forces are, however, now compelling sweeping changes in educational faiths. The multiplication of forms of useful knowledge that manifestly can and should be taught to some if not all of the rising generation brings us constantly into situations where choices must be made. We obviously cannot have everything, and it is urgent that we devise means of determining which is the best.

Again, the underlying social spirit of our time is opposed to blind action and insists on increasing purposiveness. But purposiveness in education necessitates knowledge of practicable as well as of desirable goals—practicable for learners as they now are with all their variabilities of power, capacity and opportunity; and practicable also for given societies as they now are with their needs and resources.

John Adams, the wise and witty English educator, told Americans some years ago that until recently educators had not really learned the lesson that verbs of teaching govern two accusatives. For centuries we have been content to say, "The master teaches Latin"; but the child-study movement forced progressive educators to realize that "the master teaches John (or Mary) Latin," and that it is of no less importance that he know much about John or Mary than that he know much about Latin.

But the scientific spirit of our time is about to impose a new burden on the master. He must explain and justify his reasons for teaching Latin to John or Mary

instead of music or American literature or hygiene or carpentry. To what ends, useful to society or to the individual, should the Johns and Marys or some known varieties of them study Latin—" or anything else! " the fogies will exclaim.

It is the purpose of this book to ask a variety of questions which must be answered by sociologists and educators before we can justifiably claim to possess a science of education. The writer has undertaken in each chapter to do at least three things, no one of which can, obviously, be at all completely done in the present youthful state of the social sciences. The first is to search for certain sources in the social sciences or in experience from which to derive standards of examination for the " faith objectives " now controlling in the departments dealt with; the second is to criticize those faiths which have probably come to have the injurious characteristics of superstitions; and the third is to propose, tentatively, certain new objectives for examination. Each chapter is, therefore, in a true sense an " essay " in educational sociology, designed at least to point the way to further and more detailed inquiries in this field.

Much of the material in this volume first appeared as articles in periodicals. This fact explains a variety of minor repetitions as well as some variations in style of treatment. The author wishes to express his sense of obligation to the editors of the following publications for permission to incorporate into this book materials which first appeared as articles in these journals: *The American Journal of Sociology, Educational Review, International Journal of Ethics, School Administration, School and Society, School Review, Unpopular* (now the *Unpartizan*) *Review.*

D. S.

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SOCIOLOGICAL DETERMINATION OF OBJECTIVES IN EDUCATION

CHAPTER I

EDUCATIONAL SOCIOLOGY: ITS PROVINCE AND POSSIBILITIES

I. INTRODUCTORY

MEN, women, and children nearly always live and work in groups or societies—clans, families, clubs, villages, partnerships, unions, cities, nations. Any given individual usually strives to "realize himself," to amount to the most possible, to "get all that he can" (in the more or less "long run") by virtue of the advantages of living and working in various groups. Because all other individuals do the same, group membership involves endless adjustments, compromises, tensions, quiet struggles, and sometimes open and violent conflicts.

In any given group of human beings the "strong" individual usually exerts a greater influence on the "weak" individual than does the weak on the strong. (It is assumed than an individual is stronger because he is older, or of keener mind, or of stronger body, or of better training, or of greater coöperative ability than another.) Normally, also, however, if the weakness of an individual is due to youth, lack of experience, or the performance of special function, then strong individuals protect him and give him opportunity to grow to full usefulness.

In any given human group a portion of the strength of

any individual is due, as in the case of animals, to innate or (biologically) inherited powers and capacities as these develop when given time and nuture. But another portion is due to the stored knowledge, tools, and methods of living and work which the group has accumulated and passes on to new members by example and education. The " strength " of a social group, therefore, consists not only of the sum of the biological strengths of the individuals composing it at any one time, but also of the character and amount of this accumulated knowledge—the social inheritance which can in part exist outside of any individuals for the time being (such as inventions, laws, books).

The foregoing paragraphs, which could easily be indefinitely multiplied, express some of the truisms of contemporary sociological science. They suggest that the sociologist thinks constantly in terms of social groups of human beings, but also in terms of the individuals composing these groups. Numberless quotations from sociological writers could be cited which would seem to suggest, too, that the sociologist is frequently preoccupied with aspirations and plans for " improving " conditions or for discovering the means whereby more individuals may have more well-being than is now the case.

But the sociologist is clearly not the only man to have these aspirations and plans. Deep-rooted in the nature of every man, animal, and plant, too, probably, is the ambition, desire, instinct, or vital tendency (call it what we will) to " get on," to survive, to accomplish as much as possible. Very early in the lives of many species it is found that these results can best be accomplished by co-operations—and coöperative abilities become as much the ends of evolution through natural selection or through design as protecting horns, or bigger muscles, or more

active brain. Nearly all inventions, governments, religions, and social customs have been evolved to help men to "get on," to have "life more abundantly." Hence a very large portion of the effort that men have expended on inventions, governments, religions, and other social agencies has been expended to help either these persons themselves, or others in whom they were interested, to have life more abundantly, to realize more happiness and less suffering, to "multiply and replenish the earth," and to enjoy the fullness thereof. Every man who has led an army to punish an enemy or has tried to further a religion has been concerned with his own or his fellows' well-being. So has every man who has sought to discover a new, or to improve an old, tool; to add new knowledge to the social inheritance; to make two blades of grass grow where but one grew before; to heal the sick; to reform the delinquent; to promote justice; or to educate the young.

It can be said of the sociologist only that he is trying to see social conditions more comprehensively and a little more profoundly than these others. He is trying to get at the more obscure relations and processes involved and to substitute tested knowledge for the half-knowledge of inference or slowly evolved faiths. Quite probably he finds it especially desirable that some persons shall study those things affecting human well-being which are important over long periods of time and for large numbers of people. Often he becomes especially solicitous for the well-being of those weaker ones who seem to be crowded down or aside by stronger individuals or stronger groups in pursuit of their ends. Sociology is still a very young science, a very imperfectly developed field of knowledge; and conscious applications of its results have been made in only a few of the major departments of human action. The sociologist has already exerted visible influence in the

treatment of dependency and crime. Indirectly he seems to be affecting policies of control of colonial dependencies and of state oversight or direction of some phases of production. But he has had as yet little recognition in practical efforts to improve religion, war, finance, economic production in general, domestic life, or education.

Nevertheless, it is certain that sociology is now rapidly amassing knowledge and evolving methods which must soon find application in all departments of social study. It has frequently happened that a department of practical effort has advanced far as an art before science became available for application. The working of iron and steel had reached an advanced stage of development before physics and chemistry gave a basis for scientific metallurgy. Tillage of the soil and breeding of domestic animals had elaborate technics before chemistry and biology had reached a stage where help could be procured from them. Healing the sick and preventing disease had become highly developed arts long before the appearance of physiology or bacteriology as sciences. Pedagogical practice, in schools and elsewhere, had produced its arts and its discussions of teaching problems long before men thought of applying psychology to their elucidation.

There are many indications that sociology has now reached a stage of evolution where its findings and methods can in large measure be made available for the further development of government, coöperative production, religion, domestic life, and education. It is noteworthy that traditions, beliefs, faiths, and customs play a large part in any field of practice in the stages prior to the application of knowledge and methods from the sciences; in fact, they frequently constitute the bulk of the social inheritance of guiding principles of aim, procedure, and valuation. Such was the case with the

mechanical industries largely until the end of the eighteenth century; such was the case with medicine and agriculture (except as to a few factors) until well along in the nineteenth century; and such is still, in large measure, the case with education, social control, and domestic life.

But we are clearly approaching a time of transition even in the new fields. Hardly a modern problem of politics, religion, education, economics, or community coöperation but forces us back to needs of more exact knowledge that in the last resort only the sociologist can supply—or will be expected to supply—when he is ready, for no one can pretend that sociology, relatively, is to-day more advanced or more in the possession of needed keys of interpretation than was chemistry in 1720 or biology in 1820. We have seen how psychology in its speculative stages waited generations and in its more scientific stage, years, until it came partly to a fruition of its dreams of application in the recent war. Now education, industry, and government are clamoring for its contributions.

2. PURPOSES

The time is ripe to begin a careful examination of the possible contributions of sociology and social economy to education. The two sciences most fundamental to education are sociology and psychology. From sociology must come answers to the question, What shall be the aims of education? From psychology must come answers to the questions, What is the educability of the individual? and, How shall we best instruct, train, or otherwise educate toward predetermined goals?

In the empirical fashion characteristic of social action in prescientific stages educators have, of course, for thousands of years determined the purposes of conscious

education on the basis of such knowledge and belief as was available regarding the needs of the family, tribe, state, army, craft, or church. The education of princes and priests, the training of captains and soldiers, and the instruction of citizens in reading and writing have nearly always been designed partly, if not chiefly, for the good of society or some important group thereof. At times it may have appeared that the good of the individual was the chief goal—in the teaching of Latin to the sons of gentlemen, a trade to the prospective guildsman, arithmetic to the American farmer's boy, or algebra to the minister's daughter. But no serious student would at any time have defended these efforts on purely individualistic grounds. The prevailing beliefs of the time held that the public good was somehow served through the persons thus rendered more cultured, keener, or more upright than they would otherwise have been. We may flatter ourselves that we have discovered the social justifications of public or endowed education; but in reality we have only restated ancient purposes in slightly more modern terms.

Lester F. Ward, Herbert Spencer, and some other prominent sociologists have indicated some of the possibilities of educational sociology. But educators who have recently written on this subject have been unnecessarily modest in their claims. They have seemed to hold that educational sociology should concern itself only or chiefly with the newer extensions and modifications of educational theory and practice. They have seemed desirous of avoiding recognition of the undoubted fact that the proper province of this study is the entire range of educational aims, traditional and modern, social and individual. Its primary concern must be with normal groups being educated under normal conditions.

Two recent tendencies in education have probably

somewhat misled students in defining the desirable and practicable purposes of educational sociology. Beginning conspicuously about the opening of the twentieth century there developed certain new interests (in a few cases renewed interests) in those individuals and groups that had heretofore shared little, if at all, in the advantages of the schools. It was noted that only for the upper classes—for those likely to enter on their vocations through the aid of professional schools—was systematic vocational education available. Defectives and potential delinquents received small consideration in the ordinary schools. The special educational needs of dwellers in sparsely settled areas, in crowded slums, or in broken homes were hardly recognized, and received small attention when recognized. Hence arose a large variety of demands that, in the interests of a sounder social economy, education should be extended, modified, enriched, so as to provide valuable offerings for these heretofore neglected classes or groups. Necessarily these demands had to be expressed in the sociological terminology of the day, and the needs described largely in language which had developed chiefly in connection with studies in social pathology—the first area of practical effort to which sociologist and social economist had turned.

In the second place there developed among educators during the first decade of the twentieth century, and conspicuously in America as an outgrowth of the child-study movement, a strong interest in the *socialization* of education, including all the common varieties or grades. Among many able educators the conviction grew that existing curricula were excessively individualistic in aim as well as in method—that is, their effect was to induce the individual to think unduly in terms of personal achievement, to strive to win against, rather than with, his fellows, and

to ignore the realities of social interdependence. Naturally these aspirations for a more socialized education greatly interested students of sociology as well as educators possessed of some insight into contemporary social problems.

Valuable as have been the results of these new interests which have somewhat linked up education as a field of practice with sociology as a science, it is a fact nevertheless that their net effect has been to cause many educators, and sociologists as well, to think that sociology could be of significance only in the marginal or frontier regions of education, and particularly where pathological conditions are in process of correction. Hundreds, possibly thousands, of articles have been written during the last twenty years dealing with these slightly explored fields. But it is as yet hard to find more than a scant half dozen books or articles written in the conviction that to sociology and studies prosecuted by sociological methods we must look for criteria of scientific aims in all education, and conspicuously in that which is to be provided for the average or normal 90 per cent. of our folk.

This preoccupation of pioneer educational sociologists with problems in the marginal fields of education was, of course, only to be expected. In the more ancient and familiar areas standards of aim are profoundly traditional, deeply set in dogma and custom. In some cases processes of selection have so operated as to give these a very substantial validity, even though, as in the case of all practice based upon belief and custom, there is always a very marked "lag" in making the adaptations required in a strongly dynamic social order. But, generally speaking, so strongly intrenched are our faiths in the validity of the aims usually held for educational practice in our kindergarten, elementary and secondary

schools, and liberal arts colleges, that any fundamental questioning of them still arouses the same mingled horror, resentment, and incredulity that formerly greeted religious or medical heresies and that still fiercely confront much sincere and profound political criticism.

We can readily concede that as a distinctive field of study educational sociology is as yet very imperfectly developed. It is not certain that within it are capable of being developed the necessary methods of attack on some of the most difficult of contemporary problems of curricula. Writers on educational sociology still slip constantly into the methods and language of speculative philosophy. Quite possibly we shall have to wait on the sociologists themselves for new methods of analyzing and evaluating the objectives of social and, therefore, of educational action.

For, obviously, we can have no satisfactory set of working principles in the construction of curricula until we possess fairly acceptable analyses, qualitative and quantitative, of the *values* of social life. Granted that such words as security, health, righteousness, wealth, knowledge, beauty, sociability, extension of race and communion with God express valuable ends of social action to be achieved partly through education, we are still confronted by endless problems of relative values. We cannot have everything within the space of a few years; what shall we emphasize, what ignore? Every educator knows to-day that, after we leave the lowest grades, the most serious difficulties are encountered in choosing among the embarrassment of riches presented to us. Here especially do we find ancient faith standards of values in conflict with modern aspirations for a scientific criteria (always condemned, of course, by conservatives, as a conflict between idealism and materialism).

3. DEFINITIONS OF AIMS

But, in spite of the meagerness of sociological support yet available, it is certain that scores of the hundreds of problems of educational aim now confronting educators are capable of being at least somewhat elucidated by sociological methods. It is especially important that inquiring minds address themselves to these problems, even if they can proceed only to the stage of breaking some of the crusts of custom and belief which have hitherto repelled all tools of criticism. In some respects work of this character should even now prove very productive.

It should, for example, prove easily practicable, given sufficient working resources, to analyze, classify, and, at least crudely, to evaluate the habits, knowledge, appreciations, aspirations, and ideals promotive of such values as health, wealth, sociability, and righteousness which given groups or classes of adults possess, and to trace to their respective sources in original nature, environmental influence (including by-education), and school education these various qualities. It could be ascertained how far such of these qualities as are demonstrably valuable to the possessor himself, or indirectly through him to society, have been produced by school education or, in its absence, through by-education or fostered development. The foundations could thus be laid for investigations and experimental procedures designed to determine how far direct education could or should be provided to reinforce or supersede by-education.

In the case of qualities demonstrably unsatisfactory, as gauged by standards of a scheme of social values approved by a representative jury, similar inquiries could be made. How far, for the next generation, can the con-

ditions of defective by-education be corrected, apart from the procedures of direct education? how far through proposed new forms of direct education?

As a means of giving concrete illustration to some possible studies in this field the examples given below are submitted. It is freely conceded that the suggested findings are excessively dogmatic in form and possibly speculative in origin. Nevertheless, it is confidently believed that the problems suggested are even now capable of attack by methods reasonably scientific.

1. When leading legislators, social economists, business men, and educators became convinced a few years ago that the well-being of American society as well as that of most of the individuals composing that society required substantial extensions of special facilities for education for vocational competency, and when it became apparent that such extensions could be assured only through vocational schools provided at public expense, problems of specific aim and method immediately appeared in large number. What was meant by vocational education? For what occupations were vocational schools desirable? for what practicable? At what ages, for stated vocations, should or could school vocational education begin? What should or could be the relations of school vocational education to commercial work, to productive enterprise, to apprenticeship, to shifting or promotion from one stage to another?

Throughout the earlier stages of evolution of school vocational education (of less than professional grade), theorists and doctrinaires found endless opportunities for expression. Little was definitely known about the pedagogy of vocational education and hardly more about localized and specific needs for it. A variety of courses in manual training and household arts had been developed

in schools and these presented to citizens many of the semblances of vocational education. A variety of so-called commercial and agricultural subjects had also been introduced into schools which (with the exception of typewriting and stenography) were actually designed more to impart general information *about* some vocations than to prepare for competency in their pursuit, perhaps in the vague expectancy that such information would, in some invisible way, function as vocational competency later.

It was only when objective sociological studies of the conditions surrounding the work of men and women in actual vocational practice were instituted that the promoters of vocational education found themselves on sound ground. Surveys were begun with a view to obtaining reasonably correct answers to such questions as these: What are the various vocations now followed in a given community? How many workers in each? When, where, and how did these acquire the competency they now possess? Were the methods followed by them in acquiring their present vocational powers (chiefly through extra-school education, of course) effective, or ineffective, wasteful, or the reverse? Is it in evidence (here or abroad) that school programs of training and instruction could be devised (as they have for several of the professions) which would give, in whole or in part, more effective vocational education for specific vocations than does now apprenticeship or the fortuitous conditions of wage-earning participation? What should be the program of such a school to insure specified vocational skills? Technical knowledge? Social insight (related to the specific vocation)?

Our accumulations of knowledge resulting from this method of study are meager enough as yet, but such as

they are they present good evidence of being soundly based and relatively free of speculative elements and mystical assumptions.

2. School curricula are usually designed for normal children. What shall be done for those that are greatly abnormal or variant? As a rule, philanthropy rather than the state first undertakes to provide education for the blind and the deaf, the moron and the delinquent. The very conditions of variance encountered force certainly highly specialized or new types of training—touch reading for the blind, manual communication for the deaf, objective instruction for the moron, occupational training for the delinquent. But beyond these departures, historic curricula for variant children have been patterned almost rigidly after curricula for normal children. Even yet in many schools teachers are striving to impart to blind children the same knowledge of geography that is sought on behalf of normal children; in schools for the deaf, it is a usual boast that the customary "high-school" studies are taught; and even for morons the standards of intellectual attainment sought, for example, in arithmetic, hardly differ in scope and content from those held in other schools.

Nevertheless, there has been progress in recent years, especially in the less "institutionalized" schools. Certain fundamental questions, obviously inspired by sociological considerations, are being asked. Are the pupils of a given class and grade being trained in the expectation that they will eventually leave the school and participate on a free competitive basis in the work of the world? Or is it expected that they will remain for life the protected wards of the state? According to the answers to these questions, for given groups of variant children, programs of education will obviously differ

greatly; and that fact is gradually being given influence in shaping the principles governing curricula.

But this method of inquiry has gone further. It has resulted in the foundation of many varieties of classes for children who are less manifestly variants than are the blind, deaf, and moron. It has given us special classes, opportunity classes, ungraded classes, certain types of so-called prevocational schools, day truant schools, and several others. Gradually specific aims, more or less empirically derived, are being differentiated for the various groups thus recognized.

Here again it is obvious that, given resources and time, it should now prove practicable to carry sociological methods of inquiry very far in determining the types of special schools that society should provide and the curricula and conditions needed for each type.

3. The responsibilities for collective thinking and acting forced upon us by the war gave rise to fears that our democracy would not be equal to the strain put upon it. To many it appeared that we had allowed our education, and especially that of the public schools, to become excessively individualistic. Doctor Bagley, writing in April, 1918, said:

"For the first time in our history our people are awakening to the fact that an educational system in a democracy has a fundamental duty to discharge in insuring a thorough-going community of ideals, aspirations, and standards of conduct. . . . It is safe to say that the actual sanctions that have operated to promote universal education in this country have been essentially individualistic. . . . The people are thinking to-day as never before in terms of common good. They are insisting that the common good shall be the fundamental standard in the administration of business, transporta-

tion, and industry, as well as in the conduct of public affairs. . . . To-day it is clear that the primary function of education in a democracy is to integrate rather than to differentiate the people."

The "Commission on the Reorganization of Secondary Education" created by the National Educational Association, states, among its "cardinal principles," under the head, "The unifying function":

"In some countries a common heredity, a strongly centralized government, and an established religion contribute to social solidarity. In America, racial stocks are widely diversified, various forms of social heredity come into conflict, differing religious beliefs do not always make for unification, and the members of different vocations often fail to recognize the interests that they have in common with others. The school is the one agency that may be controlled definitely and consciously by our democracy for the purpose of unifying the people. In this process the secondary school must play an important part because the elementary school with its immature pupils cannot alone develop the common knowledge, common ideals, and common interest essential to American democracy."

Now it is highly probable that back of these ideals and aspirations, of which many expressions similar to the foregoing could be cited, there is a fundamental need of readjustments in present-day education, possibly for some redirection of its aims and procedures. But it is very unlikely that we shall make substantial progress away from present educational customs—which are tardily affected by social evolution—until sociological analysis is ready to show us far more specifically than do contemporary critics of "individualistic" education what we should do in the schools to promote "integrating" func-

tions. Vague philosophical aspirations here require much supplementing with concrete proposals and these tested by available facts of sociology.

It is essential, for one thing, that we should detect, describe, and evaluate the integrating agencies now actively functional throughout America, apart from the schools. What are the effects of newspapers, movies, labor organizations, advertising, consumption of branded staples, and standards of living rising everywhere toward an American optimum? What are the effects on "melting pot" processes of the migration of laborers, Pullman car mixing of the leaders, our multitudinous fraternal and other organizations, and party politics? Certainly the hundred millions in these forty-eight states are, in spite of diversities of race, place of birth, religion, and culture inheritance a remarkably homogeneous body to-day. May they not possess, for practical purposes, a considerably greater homogeneity than critics have feared, especially when confronted by rationally perceived need for concert of action?

Nevertheless, divisive influences are certainly to be found, some rooted in the past, some arising from new strains imposed upon the social structure. Probably some of these are very serious. Perhaps the schools should play a more effective part than they do now in furthering social solidarity. What schools—kindergartens, elementary schools, junior schools, high schools, colleges? What, specifically, should they do? Toward what collective ends of appreciation, habit, ideal knowledge, should they work?

Now we can make some slight progress in these matters, in spite of the hugeness and complexity of the problems involved, by following the trial-and-error, hit-or-miss, empirical methods of our forefathers, just

as in time we could, probably, have made some progress in combating yellow fever even if we had known nothing of bacteriology. But certainly under these conditions 90 to 99 per cent. of the energy we expend will be inevitably wasted. New methods of attack, at least partically scientific in character, are needed. Can these be supplied by sociologist and social economist? In part, yes. For the rest the educator must himself develop methods of analysis and valuation of the social phenomena with which he must largely deal. Until he does this it is to be feared that much of our discussion, especially of more adequate "social" aims for education, will evaporate as fruitless speculation.

4. Heretofore, the American elementary school has comprised at least eight grades or years within which practically no flexibility of courses has been found, with the single exception that girls have not been required to take manual training or boys household arts. But there is now well under way a strongly defined movement so to reorganize elementary education that only the first six grades shall constitute the elementary school proper, the remaining grades and perhaps the first grade of the high school to be organized as a new type of school.

The processes of reorganization here at once throw us back on fundamental questions of aim. In what respects shall we, in the new school, change the historic or traditional aims, as expressed in the "subjects of study" and the more or less standardized methods of teaching them? To what extent shall we provide for flexibility either through elective offerings or optional courses? Shall we introduce into this school offerings not heretofore found in the seventh and eighth grades—foreign languages, algebra, "vocational subjects"? Should we in the junior high school greatly modify the traditional

staples of all schools—arithmetic, grammar, geography, American history, literature—or those newer subjects prized by progressive schools—manual training, household arts, music, drawing, civics, physical training, general science, and vocational guidance?

For the present the situation is one of confusion. The historic studies, deeply rooted in custom and, frequently, popular approval, exhibit as yet few changes, even in progressive junior high schools. The newer studies encounter opposition because their actual objectives are as yet so ill-defined.

Any serious discussion of the junior high-school curriculum soon drives back to a number of fundamental questions of educational aim. What should be the primary purposes of the school education of normal children between the ages of twelve and fourteen or fifteen, having regard to American conditions and requirements and the fact that we live in the twentieth century? Is it desirable or expedient that we offer vocational training or instruction during these years? For what purposes, of what kinds, and under what conditions? Toward the attainment of what educational goals shall we offer or require Latin, manual training, grammar, geography, and vocational guidance? How can we ascertain that the goals ordinarily proposed for these subjects are worth while? Are they worth while to all individuals, or to society through all individuals, or only to some individuals? To what extent is it desirable that all pupils in the junior high school be required to pursue the same studies in order that the school may adequately meet its responsibilities as a "socially unifying" agency?

In numberless ways we are thus thrown back upon fundamental problems of educational aim which only more extensive and, in places, more intensive, knowledge of

social needs than we now possess will enable us to solve. Especially good examples of these problems are found in connection with current attempts to reorganize and modernize high-school education.

4. CRITICISM OF STUDIES

5. Some new problems have here been brought to general attention by the recent development of definite demands that schools for vocational education be made available for youths from fourteen to eighteen years of age in those occupational fields in which suitable vocational education can be given during these years. The upholders of the traditional curricula of secondary schools, such curricula being composed largely of the classic and modern languages, mathematics, two or three sciences, English, and history, have taken alarm lest the competition of the "vocational" studies or courses drive out the old studies; perhaps, just as, according to Gresham's law, bad money drives out good! Certainly if the recommendations of the National Education Association Commission on the Reorganization of Secondary Education were carried out, such results might well be feared. That Commission's "Cardinal Principles" includes:

"The work of the senior high school should be organized into differentiated curriculums. The range of such curriculums should be as wide as the school can offer effectively. The basis of differentiation should be, in the broad sense of the term, vocational, thus justifying the names commonly given, such as agricultural, business, clerical, industrial, fine-arts, and household arts curriculums. Provision should be made also for those having distinctively academic interests and needs. The conclusion that the work of the senior high school should be

organized on the basis of the curriculums does not imply that every study should be determined by the dominant element of that curriculum. Indeed any such practice would ignore other objectives of education just as important as that of vocational efficiency."

Against such proposals as this, what shall we hold as to the historic studies? Latin has long been supposed to be a valuable "cultural" study and an unequaled means of mental discipline. Can we prove its value? What do we mean, specifically, by cultural studies? by mental discipline? Is it known that Latin makes valuable contributions to these ends, or do we only believe so by virtue of long reliance on dogma and custom?

But what of mathematics? of history? of physics and chemistry? even of English literature? How do we know that as prescribed or elected, these studies produce valuable results? Valuable results for whom? for society? Do they serve to "integrate" society? to lift levels of general culture? to improve democracy?

6. We are thus forced back again to fundamental problems. What are the valid aims of non-vocational education? How are these aims best to be realized through youths from fourteen to eighteen years of age? What is the place of prescription in such education? Where and under what conditions is flexibility dangerous? We are accustomed to say, somewhat vaguely, that in a democracy good citizenship and moral character must be primary aims of all education and especially of secondary education. But how, with sufficient concreteness for purposes of framing programs of instruction and training, and of testing results, shall we analyze and define good citizenship? And how can we determine the means of realizing it?

It is vaguely assumed that the study of history contributes somehow to the appreciations, ideals, attitudes,

and enlightenment which fuse into good citizenship. But our customary assumptions here are painfully vague. Is any one field of history equally good with any other for these purposes? Is the history of the Grecian states of equal importance with that of the thirteen colonies? The Franco-Prussian War with the Civil War? The life of Alexander the Great with that of Roosevelt? *Ben Hur* with *The Crossing?* The barbarian invasions with the westward movement?

Now, time is short and art is long. If we are to use history and other social-science studies as means of making good citizens we need to know much more about specific objectives than is now the case. Obviously, we must turn to sociology in increasing measure for light. Even now sociology can make important contributions through its knowledge of social control, social ascendancy, and social processes.

7. A fascinating field of study, in this connection, is the fine arts. Literature, music, the plastic arts, and dancing have obviously played a large part in bringing society to the levels of advancement it has, in certain countries, reached to-day. We are striving to develop art studies in our schools. Are we well advised? Can we deliberately train youth in those form of appreciation of art that will elevate individuals and improve the group life of the future? It is sometimes said that art is necessary to give us "ideals." Ideals in what fields of activity—economic, religious, political, martial, domestic? What kinds of ideals? What kinds of art produce such ideals? In fields where scientific knowledge has rapidly accumulated, do the æsthetic emotions or appreciations play increasing or diminishing rôles? It would be interesting to know, in this connection, why so many sociologists seem to avoid areas of æsthetic activity in their analyses.

8. For reasons that need not be examined here, the mathematical studies early assumed a great ascendancy in America. Text-books in mental and in written arithmetic were formerly voluminous indeed, and on their study children of a generation ago expended a large proportion of available time and energy. Algebra and geometry were long the hardest and most rigidly prescribed staples of secondary education.

A part of this ascendancy, especially of mental arithmetic, algebra, and geometry, was due to a belief, long held, that these studies rendered peculiarly valuable service as mental gymnastics. This belief having been undermined and largely wrecked by psychological studies in recent years, the entire question of the desirable and profitable aims of the mathematical studies is now in process of being opened up. The processes of "cut-and-try" have resulted in the elimination of much of the preposterous mental arithmetic of former generations as well as of antique topics in written arithmetic. But we have had as yet no adequate examination of the values, actual or potential, of the mathematical studies as a whole, and it is not clear how we can obtain such an examination until we shall have devised sociological methods of approach to the questions involved.

The present writer has suggested, as a means to this end, a classification of the supposed "values" resulting from the mathematical studies into "producers'" and "consumers'" values. It is a matter of common observation that mastery of some forms of mathematical knowledge and process plays an important part in certain vocational fields—those for example of the bookkeeper, electrical engineer, statistician, money changer, artillery officer, cattle buyer, machinist, and navigator. But in many other vocations it would seem that mathematical

powers play a very small part—those for example of doctor, lawyer, clergyman, editor, dentist, street-car motorman, kindergarten teacher, spinner, cook, shoe-factory hand, infantryman, and tailor.

Given the necessary means, it would certainly be practicable to ascertain, with considerable precision, the quantity and kind of mathematical knowledge and skill now required for the successful performance of the hundreds of vocations whereby men live. Given these foundations it would not be impracticable to develop a consensus of reasonably expert judgment as to what the next generation of workers in these various lines of work should have beyond the possessions (in mathematical powers) of the present generation.

But some mathematics functions in life otherwise than in vocation. As "consumers," that is, as buyers of commodities for consumption, as readers, as investors for future consumption, and as "appreciators" of the social inheritance in which we share, we need some mathematical knowledge and appreciation. As life is ordered at present, perhaps this amount is not large; but such as it is, it is doubtless important. Now it is submitted that, by the application of suitable sociological methods, it is entirely practicable to discover the scope and character of mathematical knowledge now used in any given "standard of living," class or group, and, on the basis of the facts thus found and evaluated, to propose necessary or desirable improvements in processes of instruction and training to be applied to the rising generation.

The importance of some such procedure as that here indicated appears when it is remembered that men differ greatly in their vocations, but only slightly in their utilizations. Instruction and training in mathematics for vocational purposes will clearly have to be highly specialized

and taken only after the vocational destination of the learner has been determined with reasonable probability. (The only alternative would be to teach all mathematics to all learners, because of our ignorance of their vocational goals, just as we might insist on teaching trigonometry to a million youths who are to serve in a future army, since we do not yet know which particular 2 per cent. of them will become artillery officers or navigators having acute need for trigonometry.) But mathematics of utilization (consumers' mathematics) may justifiably be made a common subject for all, at least within the stages decreed by prevailing standards of living.

But better methods of attack on the problems of aim or objective for mathematics in school than the one suggested above can probably be devised. Surely in view of the large part played by prescribed mathematics in elementary and secondary education and the inherent probability that existing aims and standards have been determined excessively by traditions and custom, such sociological studies of objectives are desirable.

5. CHARACTER OF COURSES

So much for some of the possible objectives of research in educational sociology. What shall or can be the character of the study itself? Can it consist of well-organized bodies of knowledge, characterized by unique and well-defined method? There is an old feud between the devotees of pure, and those of applied, science. The artists, too, have their troubles as between pure and applied art. Will the sociologist recognize an "educational sociology"? Can the educator afford to?

It would seem that analogies from other fields should help here; but even cursory inquiry shows that clear precedents are not to be found. It is easy to recognize

in the world of actual affairs such distinctive fields of practice as medicine, war, farming, transportation, nursing, manufacture, navigation, mining, and building. It is well known, too, that workers in each of these fields have to draw on certain "pure" sciences for help. Thus medicine draws conspicuously on chemistry, bacteriology, and physiology; war on mechanics, chemistry, mathematics, and, now, psychology (note how many scientific organizations have recently discussed the topic, "The Part Played by the Science of ——— in the War"); farming on chemistry, physics, and biology; transportation on physics and mathematics; nursing on biology, chemistry, etc.; manufacture on mathematics, economics, physics, and chemistry, at least; navigation on astronomy and mathematics; mining on geology, chemistry, and mechanics; and building on mathematics, mechanics, and others.

In all of these fields where pure science and practical achievement join hands there seems always to have prevailed a deep-seated reluctance to define or bound the "liaison" topics. The academic mind seems always to have preferred to require the student to "get" the pure subject as a whole and then to make his "applications," however long, tedious, and unproductive the process. A good example is found in farming. Scientific tillage of the soil utilizes in important measure certain knowledge met with in pure form in physics. But the range of physics is very vast, whereas that of "soil physics" is very limited. But the usual academic theory requires that the student of agronomy should come prepared in physics—although manifestly optics, acoustics, magnetism, and probably many other topics have not the slightest relevancy to the farmer's work.

In all other fields similar conditions prevail. Only

rarely is the student of engineering permitted to concentrate on those phases of mathematics that are functional in his profession. Physicians and nurses must take biology, although even that subject applies only in part to their prospective work. Miners study all of geology, war leaders all of chemistry, as these subjects are organized into introductory texts.

Now the prevailing tendency on the part of educators to require that "applied phases" of science shall be approached from the background of the science as a whole seems often to have prevented definite organization of the linking topics. It is true we have soil physics, agricultural chemistry, educational psychology, and medical biology. But these subjects only occasionally adhere with any precision to the fields apparently delimited. In fact, it would appear that, seeking a logical organization, for which they are ill-adapted, they fail of all organization.

Education, like medicine and the other fields referred to, is also an ancient area of organized practical effort. It, too, can and should draw upon the sciences for guidance—especially upon psychology for method and upon sociology for objectives, but also upon biology and physiology, architecture and statistics, for help in particular needs. Indeed, we already have numberless texts on educational psychology, and we may now expect many on educational sociology.

But can we require somehow that educators will go to sociology chiefly for those contributions that can actually assist them in solving problems peculiar to education? The idealist, of course, holds that all problems belong to education; but that is not a view that can prevail with the man who effectively plans or executes the day's work. Surely we shall waste valuable time and effort if we repeat for all our pedagogical builders the educational

mistakes made in medicine, engineering, and other similar areas where even the prospective soldier of average ability has been forced to attempt to build the same foundations as the man quite certainly destined to be a general or field marshal.

And what shall we say to the study of educational sociology by those thousands of bright, wholesome girls, who throng the classrooms of normal schools, and who will give from three to six years to the vocation of teaching ere they embark on the long voyage of matrimony and homemaking? Must they, too, be expected to build on broad foundations? Not least, certainly, among the problems confronting educators, is that of determining the desirable and practicable objectives of vocational training for the various teaching callings. Here, certainly, we have need of all the leadership the professor of pedagogy can give us.

CHAPTER II

READJUSTMENTS OF SCHOOLS: THE JUNIOR HIGH SCHOOL

THE new social economy developed during the closing years of the nineteenth, and the opening years of the twentieth, centuries has already imposed many new demands on public and private education. In some cases these new demands can well be met by extensions or readjustments in historic types of schools—kindergarten, elementary, high, collegiate. In other cases new types of schools, with specialized aims, equipment and supervision may have to be created—especially for vocational education, continuation school education, and the like. Apart from current movements to develop specialized vocational schools for the rank and file of prospective workers the most important and fruitful of current efforts at administrative readjustment center around the proposed new type of school, sometimes called the intermediate, and sometimes the junior high, school.

I. THE PRESENT SITUATION

These efforts, now being made in various states, contemplate the reorganization of curricula of training and instruction for children from twelve to fourteen or fifteen years of age. We are justified in assuming without argument that the scope and character of that instruction and training are expected by all progressive educators to be materially modified in the near future. Readjustments in administrative plans, restatement of purposes, and new developments in means and methods employed are now

under way. For some years educators have discussed plans for a "six and six" division of the years given to elementary and secondary education; and we now hear much about the intermediate school and the junior high school as means of providing better education for children from twelve to fourteen years of age. Already a large number of interesting experiments in this direction are being tried. These experiments suggest several quite distinct questions of an administrative nature. For example: (*a*) Is it desirable that pupils in the seventh and eighth grades, or even all elementary pupils over twelve years of age shall be taken away from schools containing the first six grades, to be taught in large central schools in urban communities and in connection with high schools in rural communities? (*b*) Have studies suited to children of these ages, and highly desirable for some of them, so multiplied that a wide range of possible choices now exists or would exist if school organization permitted? (*c*) Is it desirable that different courses of instruction shall be available for pupils of these ages—courses having common studies perhaps, but varied by means of optional or alternative studies so as more nearly to meet the needs of varying powers, interests and probable future possibilities? (*d*) Is it desirable that courses of instruction shall be so flexible that individual pupils shall be enabled to elect studies so as to make individual programs of instruction?

The existing type of elementary school organization as found in almost any urban community in the United States is usually as follows:

(*a*) The school consists of eight or nine grades, children in which, ranging from five to about fifteen years, are all housed in one school building.

(*b*) From one-fifth to one-third of the pupils twelve

years of age and upward are found retarded, in grades below the seventh, competing with younger and, as a rule, brighter children.

(*c*) The grade teachers teach all subjects in grades below the seventh; and in the seventh and eighth, all but manual training for boys and household arts for girls; at times music and drawing are taught departmentally, and in perhaps three to five per cent. only of all schools fairly comprehensive systems of departmental teaching in general are found.

(*d*) The upper-grade teachers are women, with increasingly rare exceptions; these women have not had special training for upper-grade work but are, as a rule, the abler of the teachers who obtained their first experience in country schools or lower grades (upper-grade positions frequently carry better salaries, and are therefore sought by women who expect to remain permanently at teaching).

(*e*) The course of study is uniform for all pupils alike, except for the differentiation of manual training for boys and household arts for girls; its primary elements are English language, English literature, geography, American history, and arithmetic; while hygiene, science, drawing, music, manual arts, civics, etc., are secondary or incidental elements, foreign language and vocational guidance being rare elements.

(*f*) Standards of graduation are determined almost wholly by the prevailing standards of admission to high school; hence, as a rule, less than 50 per cent. of all pupils required to attend school obtain the elementary diploma.

2. THE PROPOSED JUNIOR HIGH SCHOOL

The junior high school type of organization should, in the minds of many experts, have the following features:

(*a*) All children from five to twelve (except children under twelve who have finished the sixth grade) should be taught in schools located near their homes (schools which need not exceed four or five rooms in size), staffed by women teachers only.

(*b*) These lower elementary schools should never be very large—ten or twelve rooms would be a desirable maximum—and the principal should be simply a head teacher; but for each fifty to seventy teachers in these schools in any community there should be a woman supervisor of instruction.

(*c*) All children between twelve and fifteen years of age (including children under twelve ready for the seventh grade, and excluding children under fifteen ready for the regular or senior high school) should be sent to the central junior high school or intermediate school (it should be assumed that a walk of one and one-half, or even two miles is not excessive for this purpose).

(*d*) The course of study in the central school should offer the pupils a large range of elective or optional studies in addition to certain essentials in English language, English literature, American history, community civics, and geography, which latter should be prescribed for all (for retarded pupils special classes in these subjects to be formed).

(*e*) Promotion should as far as practicable be by subject, so that a retarded pupil, for example, in the fourth grade in arithmetic may, if qualified, enter seventh-grade geography; and a boy backward in history may nevertheless take eighth-grade industrial arts (manual training) if qualified.

(*f*) Teaching in the junior high school is expected to be departmentally organized by subjects, or, preferably, along lines of the Gary plan, by groups of related

subjects; and it is expected that this organization will produce a demand for specially qualified teachers.

(*g*) If the state is willing to pay the price, a certain proportion of men teachers should be assigned to departmental positions, not primarily because they are necessarily better teachers than women, but because it is desirable to introduce, in boys' classes, at any rate, the influence of masculine personality.

3. NEEDS TO BE MET

Those who favor such reorganization of education as will give the six-three-three plan or the six-two-four plan—with the junior and senior high schools either as two and four year or three and three year schools respectively, and in any event as large central schools—do so because they believe that, on the whole, the psychological conditions of children as well as their social needs justify such reorganization, even if it cost the community slightly more financially. What are those conditions, and what are those needs?

1. The conditions are summed up in the two words "increasing variability." Uniform programs of education, uniform teaching methods, and non-specialized teachers presuppose groups of people of substantially uniform characteristics. But all recent inquiries tend to bring into relief facts as to the increasing unlikeness of children beyond twelve years of age. We recognize them as differing moderately as regards height, weight, and bodily strength; materially as regards abilities in such studies as literature, vernacular language, and history; and very greatly indeed as regards abilities and interests in music, plastic and graphic art, abstract mathematics, alien language, and manual constructive work.

We should not, of course, fall into the foolish error

sometimes made in educational writings, of supposing that these differences are greater (whatever that may mean) than are the resemblances or likenesses in the case of any two children. Two children of twelve may differ in height by as much as fifteen inches, but almost never do they differ by 25 per cent. of the height of the shorter. No two children differ as much in respect to ability to learn a foreign language as either one does from a horse or other animal as respects such learning. In the absolute sense, therefore, it may be repeated, the facts of resemblance among young human beings (as regards the elements that make groups of them relatively homogeneous) are vastly more numerous and significant than are the facts of unlikeness. But as regards the facts of likeness and unlikeness that are important to education, to the ends and purposes for which schools exist, all evidence points to the desirability and essential humaneness of all arrangements which permit, in processes of instruction and training, recognition of deep-seated differences of ability, taste, and general educability.

Let us now make two general propositions as to which there will be no serious debate.

(*a*) If, possessed of endless resources and hampered by no restrictions of any kind, we were making educational programs for our children, we would doubtless, in light of what we now know regarding the unlikeness of individuals among them, make the programs for no two of them exactly alike in all respects. We would pay tribute to obvious differences as regards the gifts bestowed by the gods of heredity and early environment; and we would not ignore the probable opportunities and limitations decreed by fortune in the child's future life. We would strengthen some of his already strong powers; and where he was weak we might justly forego to strive

for the powers for the foundation of which nature did so little.

(*b*) On the other hand, except in rare cases of genius or defect, it is not practicable to educate children on the basis of strictly individual qualifications. In education, as in war, industry, transportation, worship, housing, and entertainment, economy and general efficiency require that we deal with people in squads, platoons and divisions. We must have companies and regiments for fighting; congregations for worship; gangs, crews, and departments in industry; audiences and parties for entertainment; passenger groups and classes for transportation; and grades and classes in schools. To talk of individual instruction, except as that is practicable within group organization, is to talk nonsense, except where the few children of wealth and rank are concerned. We can, of course, strive to produce the maximum of individual thought, initiative and action on the part of the learner in the class, just as we can on the part of the unit in the squad, crew, congregation, audience, or passenger group. But it is clear that individuality of action in these groups must, while the ends of group action or reception are to be met, be greatly subordinated to the requirements of subjection to orders and enforced limitations, uniformity of stimuli, and conformity in behavior.

In the organization of groups for school education, therefore, we cannot, though we would, provide special programs for each individual (as men and women did for Helen Keller). We must provide for a certain amount of regimentation, classification, grouping. But these groupings must not be fixed in rigid groups. We must not allow the school to become a Procrustean bedstead to an extent greater than is absolutely necessary and inev-

itable. We have had the school compared to a sawmill, cutting its "stock" into standardized lengths. Schools have done this in the past. Like armies, churches and transportation, schools have at times made the organization of groups an end rather than a means, forgetting that the units with which they deal are in a considerable measure unlike.

2. Besides the psychological "conditions" of the individuals composing our school classes, what are their social "needs" that justify the proposed reorganizations of upper-grade work? The keynote to these needs will be found in the words "progressively increasing differentiation." Modern civilized life is like modern industry or modern army organization. Functions are being increasingly differentiated, and activities and interests specialized according to all kinds of capacities and opportunities.

But it should be clear at the outset that conflicts of social objectives must first be met. The groups into which children must fit are of various kinds. There are large groups and small groups—as (*a*) the nation, the religious denomination, the political party, the potential army of defence, the readers of good books, the economic organization; and, opposed to these, (*b*) the local community, the particular church or sect, the political gang, the squad or mess, the partisans of a particular book or writer, the embattled employees of a particular industrial establishment. There are vocational, as against cultural, groups—farmers, machinists, bankers, teachers, waitresses, homemakers, and defenders, as against patrons of art, readers of classic literature, subscribers to specified magazines, visitors to the "movies," illiterates, etc. Various other groupings may be distinguished—such as family groups,

racial groups, sociability groups, economic coöperative groups, worshiping groups, etc.

Now it is one of the functions of education to predispose and fit its pupils for assimilation with the larger, as against the smaller, groups, in the interests of a wholesome social order, harmony, and economy of effort. We, therefore, seek that all American children shall speak a common tongue, write a mutually understandable prose, have a common knowledge of certain standard literature, comprehend and appreciate alike the important facts of our geography, history, and civic life.

But it is another function of education to see that our young people are fitted efficiently to discharge their responsibilities in the small groups of which they will inevitably be a part. Membership in, and sympathy with, the large groups of civilized society are essential to the harmony of the social order; but active and properly coördinated participation in the activities of smaller groups is essential to efficient personal growth, individual efficiency, and ultimate social usefulness.

Hence the desirability of partial group differentiation of pupils even as early as twelve years of age. Their needs include fitting for those special group activities in which they can most profitably serve themselves and society. As to some of these children it is certain that their opportunities for school education will close forever at or near fourteen years of age. We may not always know the particular individuals of whom this is true—although a shrewd social diagnostician, knowing the facts as to the home conditions, school standing in studies, intellectual interests, general moral behavior, and physical conditions of one hundred children at twelve years of age, could, I think, guess right as to 90 per cent. of

them. But even if we do not know the future as regards particular individuals, we do know it in large measure of collected groups, in the statistical sense—we know of probable numerical ratios and percentages; hence, any refusal on our part to provide opportunities into which individuals will fit as well as may be on the initiative of themselves or their parents, with perhaps our advice, is wasteful, inefficient, and essentially undemocratic.

There is a certain small percentage of our pupils who, by virtue of their probable future opportunities for usefulness and self-gratification, ought to have early opportunity to study a foreign language—German, French, Portuguese, Russian or Japanese. Here again, at the age of twelve we may not be able to select just the persons who should be advised to do this; but if the opportunities are provided, and if parents are fully advised as to the conditions, requirements, and probable fruits of this work, and if admission to it is restricted to those who have shown superior ability in the vernacular, choices will be right perhaps 50 or 70 per cent. of the time.

It is assumed here, of course, that no vocational training as such will be given in the junior high school. That will come later and will naturally require a large degree of specialization—in a city the establishment of even hundreds of different and unlike specific vocational schools to prepare for the hundreds of separate commercial, industrial and domestic occupations into which modern life is divided.

But in the junior high school large opportunities should be given for practical arts training, which, while not vocational in its outcome, may help towards vocation-finding, and will certainly give insight into the ideals and social significance of occupational life, if properly directed.

To be of real service, however, practical arts education (industrial arts, agricultural arts, household arts, nautical arts, and commercial arts are all included under this head) must be diversified according to the fundamental interests of children; and the spirit in which each type of work is to be approached should be that of the amateur. Courses should be very flexible. A pupil entering printing for the first time, for example, should have the option of several simple introductory projects; after he has given reasonable attention to any one he should, if he wishes, be permitted to take up projects in a totally unrelated field—*e.g.*, gardening.

Hence the need of the flexible course of study which only the junior high-school type of organization can provide.

Let us repeat: The proposed junior high-school type of school organization is an administrative means—a necessary means—to certain essential forms of improvement of the education of young people from twelve to fifteen years of age.

4. UNLIKE OBJECTIVES IN CURRICULA

Every specific subject or even phase of subject of school work should, of course, be taught with certain conscious ends or objectives in view. These objectives or goals determining the teachers' aims are but illy defined at present, especially where the education of children from twelve to eighteen is concerned, but we may expect them to be more fully analyzed and stated in the near future, as educational processes become more scientifically correlated between social and individual needs on the one hand, and individual powers and possibilities on the other. But in the light of present experience, it seems highly

desirable to classify the objectives of the education that is adapted to children of from 12 to 14 years of age into at least two groups according to the presence or absence in each study or phase of study, of certain fundamental characteristics. A few concrete cases will make this clear.

The objects to be attained in teaching a pupil to spell, for example, differ essentially from the objects to be attained through having the same pupil listen to a good musical recital or witness a dramatic performance. It is unfortunate that educational psychologists have not given more attention to the fundamentally unlike character of the learning processes here contrasted. In teaching spelling the outcome expected on the part of the pupil is a certain quite definite and easily recognized ability to *do,* to *execute,* to *express in action,* and the learning process cannot be terminated economically until this end is achieved. On the other hand, the learning achieved in hearing a recital or witnessing a dramatic performance (and we are agreed that some form of learning is thus achieved) can be subjected to no profitable test of *expression,* of *doing.* We expect absorption, assimilation, growth, as results, but the final outcome is so remote from the original stimulus that we do not, ordinarily, seek to trace connections.

For the sake of convenient classification, let us call the first type of learning the alpha type, and the second the beta type. Let us repeat that the conspicuous result expected in the case of the alpha type is ability to *do,* to *express in action,* while the most tangible result expected in the case of the beta type is *appreciation* or, in one sense of the word, *interest.*

In the seventh and eighth grades, it is probably in

accordance with sound pedagogy so to teach arithmetic, penmanship, composition, spelling, and, presumably, grammar that these subjects should properly fall in the alpha class. On the other hand, literature, science, and civics, are, or doubtless ought to be, so taught as properly to belong to the beta class.

History, geography, music, art and practical arts seem to be composite. It is manifestly important, for example, that certain phases of history and geography should be so definitely taught that the resulting fixed knowledge becomes as available and inerrant as should be knowledge of the multiplication table. But it is intolerable that all geography and history as organized for children from twelve to fourteen years of age should be so taught. Most of the supplemental material used, and indeed much of the contents of the text-books in current use, also, should be read, talked over, and the resulting impressions assimilated, but no *fixed* and instantly *usable* knowledge need be expected in these cases. Hence the proper organization of these subjects should involve a conscious and definite differentiation between alpha and beta portions teaching units or phases.

It is difficult to determine the effect of the differentiations here proposed on music and drawing (or art) because the purposes of these subjects in elementary education are, as yet, so imperfectly defined. It is probable that both subjects are now composite, and that in the interest of effective teaching they should be differentiated into alpha and beta phases or teaching units. There is much discussion at present of the teaching of music for the purpose of developing musical *appreciation*. Picture study has a place in some schools for a similar purpose. Clearly these are beta phases of these subjects. But it is

also probably desirable that some children should be taught to *execute* music—that is, to read musical notation accurately, to sing, or to play. These are clearly alpha phases. Perhaps, also, upper-grade pupils should be given definite drill in drawing as an art of expression—also an alpha phase.

Now the distinction here made is of fundamental importance in any discussion of flexible courses, or elective systems, because of the probability that the right and expediency on the part of the school of prescribing studies or phases of studies applies with far greater force to the alpha group than to the beta group. For one thing, the processes of learning in the alpha group are much more arduous, as a rule, than in the beta group; but in the alpha group, at least for the elementary school, will be found many of the common intellectual tools of civilized society—the arts of oral and written expression, receptive (or silent) reading, definite knowledge of geographical and historical facts, simple principles of hygiene, generally accepted rules of behavior, etc. On the other hand, learning in the beta group is easier, or should be, if needed adaptation is made for individual interests; and in respect to appreciation studies generally, society can well afford to have and perhaps even to procure a large degree of variability rather than of uniformity among its members. We should all spell alike and have in common a definite knowledge of some of the facts of American history; but it is of advantage rather than disadvantage that our people should vary greatly as to the fields or individual examples of literature, and of history, in which they find interest and satisfaction.

It should, then, theoretically prove possible for us to enumerate all the desirable ends or objectives in the sys-

tematic education of young people from twelve to fifteen years of age, and to classify them into the two divisions suggested above, according as the learning sought is specific, definite, and instantly usable in active life, or as it results in appreciation, taste, modified sentiment, ideal, and undifferentiated background of knowledge (otherwise experience and intellectual nurture).

5. POSSIBLE CURRICULA OF JUNIOR HIGH SCHOOLS

In order to set clearly before ourselves, without unnecessary restrictions, the possibilities of flexibility in the school for children from twelve to fourteen years of age, let us assume a very large city school receiving only pupils who have completed sixth-grade work, and designed to retain these pupils for but two or three years. Let us assume further that the school possesses financial means sufficient to enable it to organize and offer any kind of instruction for which there is a substanial demand, and which in the judgment of the authorities it is wise to offer to pupils of the stated years and qualifications. Let us furthermore assume, for sake of concrete description, that the work is offered as units, a unit consisting of the equivalent of five weekly periods of sixty minutes each, extending through twelve weeks, to cover both instruction and recitation, and any other form of exclusive claim on the attention and energy of the pupil of average power for the sixty minutes. Theoretically, then, in view of recent progress in enriching elementary school curricula and in urging desirable new forms of instruction and training, the following subject courses might profitably be offered in grades seven and eight in such a school, the alpha and beta units being separately indicated:

(Figures at left refer to explanatory notes at end of section.)

	Name of Subject	Alpha Units	Beta Units
(1)	English Expression:		
	(2) Oral Expression	6	
	(3) Written Expression	6	
	(4) Grammar	3	
	(5) Word Analysis	1	
	(6) Spelling	1 or 2	
	(7) Penmanship	1 or 2	
	(8) Alphabet	1	
	(9) Silent Reading	1 or 2	
(10)	General History		6
(11)	American History	3	3 or 6
(12)	Community Civics	1	2
(13)	Literature	1	5
(14)	General Moving Pictures		3
(15)	Music, Individual Vocal	3	
(16)	Music, Chorus	1	
(17)	Music, Piano	3	
(18)	Music, Appreciation		3
(19)	Music, Band	1	
(20)	Drawing, Representative	2	
(21)	Art, Appreciation		3 or 6
(22)	Geography	1 or 2	2 or 4
(23)	Science, General	1	2 or 5
(24)	French	3 or 6	
(25)	German	3 or 6	
(26)	Spanish	3 or 6	
(27)	Latin	1 or 2	2 or 4
(28)	Industrial Arts		3 or 6
(29)	Agricultural Arts		3 or 6
(30)	Commercial Arts		3 or 6
(31)	Household Arts		3 or 6
(32)	Arithmetic, Commercial	3 or 6	
(33)	Arithmetic, Industrial	3 or 6	
(34)	Arithmetic, Home	3	
(35)	Arithmetic, Geometry and Algebra	3 or 6	
(36)	Hygiene	1 or 2	2 or 4
(37)	Physical Training	1 or 2	5 or 4
(38)	Vocational Guidance		3 or 6
		58 or 88	52 or 82

(1) To include all general studies designed to give greater power in the use of the vernacular, oral and written.

(2) Including reading aloud, "speaking," correct use of voice, "oral composition" (or sustained delivery to audience), debate, correct usage, etc., all from standpoint of effort to secure definite attainments.

(3) Composition, letter writing, correct usage in writing, etc.

(4) Systematic analysis, with correction of personal solecisms.
(5) Origin and structure of common words.
(6) Chiefly to meet individual needs. Good spellers excused.
(7) Chiefly to meet individual needs. Good writers excused.
(8) Drill in alphabet, to produce readiness in use of indexes, dictionaries, etc.
(9) Drill in technique. The subject not clearly defined as yet, but evidence exists that it is very important.
(10) A general reading and lecture course—no drill.
(11) Selection of special details and fundamental generalization for drill for alpha units; general and interesting phases of subject as beta units.
(12) To include a small amount of definitely organized knowledge as alpha units. Beta units to cover thrift, reading of sanitation, practice voting, school self-government, readings, visits, etc.
(13) Close analytical study of one or two selections, and certain central facts of literature, under alpha units. Beta units to include home reading, library, etc., but no requirement as to uniformity of material for all pupils. Individual choices, subject to approval of instructor.
(14) That is, not definitely correlated with other subjects, and designed chiefly to enhance discriminative appreciation of moving pictures as a means of education and diversion.
(15) Drill for pupils having marked capacity to profit from such study.
(16) Selected group desiring drill.
(17) For selected pupils desiring definite training.
(18) All available forms of music offered to all desiring such training.
(19) Selected group desiring definite training.
(20) A general course; additional specialized work in practical arts.
(21) Plastic and decorative, and in part correlated with practical arts, but should include pictures, room decoration, architecture, advertising illustration, and moving pictures.
(22) Separation of formal or drill phases from appreciative phase, preserving correlation, by means of specific "teaching units" for both alpha and beta phases.
(23) Largely interpretive of scientific aspects of surroundings.
(24 to 26) To produce mastery of spoken or of written language, according to predetermined aims.
(27) For drill in part. Subject could be reorganized to give insight and appreciation (beta units) in part.
(28) Miscellaneous shop experience on projects from wide range of industries, including reading about the industries, and other means of enriching experience. Projects from textile, printing, metal working, wood working, food packing, transportation and other industries. Amateur standards of achievement, not "professional."
(29) Including gardening, poultry raising, correlated reading, etc.
(30) Typewriting, elementary bookkeeping, commercial penman-

ship, commercial readings, visits to commercial establishments, etc. Much of it on practical project basis.

(31) Primarily to build on home experience and to enhance appreciation.

(32 to 34) To be definitely practical subjects, correlated with practical arts courses.

(35) Recommended for pupils expecting to enter high school and, later, college.

(36) To include certain alpha phases for definite knowledge and practice—teeth, posture, etc.—and others (beta) for insight and wide appreciation.

(37) Some definite physical training to cure defects or to prevent apprehended defects (alpha units). Games, "boy scout" activities, miscellaneous developmental play, athletics, etc., for beta units.

(38) Readings, individual conferences, lectures.

6. PRESCRIPTIONS VS. ELECTIVES

The foregoing idealized curriculm shows clearly that there is even now available for possible use in courses of study for the junior high or intermediate school many times as much material as any one pupil can compass. Common experience teaches that hardly any subject is included above which cannot be "used" in some educational way, and to the interest and advantage certainly of individuals and even of groups of pupils. But there are not many of these units that can reasonably be regarded as essential to all pupils alike, and which therefore should be universally prescribed as positive requirements. Equally, there are few that any pupil should be prohibited from taking if he wishes—here called negative prescription.

But what shall be the bases of these positive and negative prescriptions? They certainly include at least the following: (*a*) the limitations imposed by the varying native capacities of pupils; (*b*) the requirement that each pupil, even against his own desire and that of his parents, shall, as a part of his right to a protected childhood and as a logical accompaniment of compulsory school attend-

ance, be required to receive the instruction and training that will probably be necessary or greatly advantageous to him in later life; and (*c*) the right of society to have each person fitted as far as may be to take his part as citizen, parent, soldier, and worker in a world where all human activities are increasingly socialized and corporate in character.

No argument is required to prove that children of twelve to fourteen years of age vary greatly as to natural capacity. Some are so talented that they can carry a large program of studies with ease and profit. Others are fortunate if they can, only at best, meet minimum requirements. Some are born with natural gifts for music, foreign language, and drawing. These pupils can master their favorite subjects with an ease not possible to children less gifted in these directions. It is the observation of every teacher that some children have inferior natural capacity for arithmetic and other forms of mathematics, while others find only slight difficulty in these subjects, even in portions where rigorous abstract thinking is required. These natural limitations will therefore be influential in determining what large numbers of pupils will, or will not, be allowed to take.

On the other hand, the rights of the child, irrespective of his own desires in early youth or those of his guardians, to obtain or be given the education essential to a fair start in life are of paramount importance. This right applies not only as regards those minimum attainments in reading, writing, spelling, and number which are to be expected of all normal children; it should include also the requirement that children, manifestly talented in certain directions, shall be obliged at a suitable age to begin studies, such as foreign language, that may later, as far as can reasonably be foreseen, prove essential in the

careers and positions of personal influence towards which their native powers seem to direct them.

Finally, no one will dispute the obligation on the part of society to require all persons to acquire in childhood at least the minimum of knowledge and training which is essential to their successful participation in corporate life. Not only are the arts of expression to be included here, along with moral training, knowledge of civic facts and responsibilities, and everyday arithmetic; eventually each person may be required to submit to training for a vocation, and for the work of the soldier. Society must give these kinds of education as a means of self-preservation.

But, when an extensive curriculum of subject courses is offered in a school, the burden of proof rests on the school to establish a strong presumption as to the necessity of the units which are prescribed, whether for all or for those electing stated courses. Subject to the requirement that the pupil and his parents provide for the full use of the pupil's time, the learner should be free to elect his own program of studies, unless the school authorities can definitely establish the desirability of prescription.

Clearly, then, educators charged with organizing and administering education for persons from twelve to fifteen years of age are, or soon will be, confronted by conditions which constitute, if the distorted figure may be permitted, a three-horned dilemma: (*a*) Possible educational offerings (or opportunities for giving particular kinds of instruction and training) are becoming many fold more numerous than can be taken by any one individual or group of individuals presenting like characteristics; (*b*) the native capacities of pupils or of distinctive possible groups of pupils vary greatly; and (*c*) some subjects or phases of subjects, as yet not fully determined or

defined, should in some cases be prescribed for all and in other cases for all having stated forms of ability or probable future field of usefulness. How shall the administrator proceed under these conditions? Shall he disregard, as he has heretofore done, the first and second considerations, and insist on a limited curriculum of prescribed studies for all, thus ignoring opportunities for varied training and instruction? Shall he include in his curricula all possible studies, but segregate them in rigid courses, so that each shall constitute a fixed system in itself, like a railroad route, of such a character that the pupil, once en route, cannot cross to another line, and can only change his route of travel by going back to the starting point again? Or shall he simply organize the school offerings into one long series and allow the pupil to range and choose *ad libitum?* Manifestly, each of these courses is open to objection. They are all psychologically unsound.

In reality, each method is desirable and feasible as to certain elements or types of studies in the curriculum. Some studies or subject courses should be prescribed for all pupils; some should be prescribed only as component elements of definite courses, and therefore to be required only of learners electing such courses, while, possibly, elective to others; and some should be freely elective to all. But it is here contended again that as regards all prescribed work, whether generally prescribed, or prescribed for those electing specified courses, a heavy burden rests upon the authorities making the prescriptions to establish the presumption that it is *better* that these prescriptions should thus be made than that the pupil, subject to reasonable supervision from home and school, and to the general requirement that he must employ all of his

school time profitably, shall freely elect his own course (subject, also, of course, to the limitations imposed by the necessities of efficient and economical school administration). Here we are, of course, at once involved in the old debate as to the merits and demerits of the elective system and the capacities of learners wisely to use such a system.

All of us have read (and perhaps participated in) lengthy discussions as to the elective system in college and school. We were long ago told that learners—whether college juniors or high-school freshmen—were not old enough or wise enough or earnest enough to choose their own studies to advantage. They would usually choose "snap" courses. Their programs, under freedom of election, would consist of uncoördinated subject courses, the resulting learning would be fragmentary, discursive, and unsubstantial. "Easy instructors" would be in favor, real efficiency would disappear, and chaos would prevail.

It is a fact that in nearly all debate as to the elective system, its opponents have had the stronger arguments. The proponents, while usually able eventually to win the day in action because of favoring circumstances, have never, it would seem, formulated the most fundamental and strongest arguments in favor of their position.

It must surely be admitted that the pupil, whether in seventh, or tenth, or fifteenth (college junior) grade, is but poorly equipped to make so momentous a choice as that involved in electing the studies he will henceforth pursue. Almost equally, after college graduation, he will be but poorly prepared to elect his profession, his place of future work, his physician, his political party, a woman to be his wife. Here we express, of course, only

an admission that our system of education includes as yet hardly any provision for adequately guiding the individual in the matter of many, if not all, of the important decisions he must make in life.

For, if we ask what is the alternative to free election of studies, even, let us say, in the college period of education, we are confronted by the fact that except in rare instances there exists as yet no organized procedure whereby the *individual,* with his limitations of capacity and opportunity, his interests, and his obligations to society, can be guided into making choices that best meet or serve his needs. The opponents of election have probably never asserted that they were ready to provide the personal attention and scientific insight that would be required adequately to have prescribed for the individual student on the basis of sound diagnosis the best program of studies for *him.* It is certain that in college and secondary school this could not be done for the sufficient reason that never yet have educators in these institutions accomplished anything substantial in the way of capacity for making scientific diagnosis of the capacities, limitations, and probable opportunities of individual learners.

Furthermore, even assuming that such diagnosis were possible at any period, the prepossessions of the advocates of rigid courses—or, usually, of one rigid course—would probably have prevented them from studying the variant qualities of the minds of their students, again for the sufficient reason that the all-important consideration, as teachers have believed, was the subject to be taught—Latin, algebra, Greek, rhetoric, logic, physics, etc.—and not at all the characteristics of the individual learner.

In other words, the historical alternative to free election, at least of courses, if not subjects, has been rigid

prescription as determined by inflexible tradition or custom or educational theory. The variability of learners as to capacities, interests, and needs has been ignored. Traditions and dogmas as to the superior or even unique educational values of certain ancient subjects of study have governed. The newer subjects were intrinsically inferior, if not worthless, educationally, hence any choice of them has been regarded as necessarily bad. The thought that election of studies is bad has always been fathered by the wish that it should prove bad from the standpoint of the opponent whose favorite studies might not be elected.

The various attempts heretofore made to modify, on the one hand, the rigidity of the inflexible one-course curriculum, and, on the other, to prevent the wasteful possibilities of completely free election, have constituted admissions that adjustments of courses and studies, based partly upon the capacities of learners, and partly upon their varying needs, are highly desirable and probably feasible. But it is a fact that no satisfactory statement of the principles which would guide in the matter has, as yet, been formulated. There is still too often the naïve assumption that the "system"—that is, the collection of educational dogmas and traditions as expressed by unprogressive educators, usually through conference or committee edict—knows best what the "student" needs and should have. This is not an individual student, James Ferguson, for example, but an abstract human being, an educational John Doe, who has met entrance requirements and who is probably assumed to be taking his class attendance in the same spirit that he would a necessary, though distasteful, sentence to a hospital.

It is still too early, perhaps, to formulate the under-

lying principles which should govern flexibility of curricula and courses; but it is possible even now to apply to the future junior high-school curriculum the best results of contemporary theory and practice as to this educational problem in secondary school and college.

7. CONTROLLING PRINCIPLES OF FLEXIBILITY IN JUNIOR HIGH SCHOOLS

If we take, for example, the entire range of subject courses that it is possible to offer in the junior high school, it is clear that all cannot be regarded as being on the same footing from the standpoint either of election or prescription. Some are essential to all, many essential to none. Some are essential in certain courses, others essential to no particular course. On the other hand, there are many that may well be regarded as educational luxuries —highly pleasurable to those who can afford them and surely not injurious to any who can take them without detriment to their more necessary work. But what are the subject-courses that belong in those respective categories? It is difficult for us to reach sound conclusions here because our prepossessions are at present so much stronger and more clearly defined than are any available findings based on scientific study. In the idealized curriculum for a junior high school given above there are found from fifty-eight to eighty-eight alpha units (or subject courses to be taught with the aim of producing power to *do*), and from fifty-two to eighty-two beta units (or subject courses in which *appreciation* is a controlling purpose). No one average pupil, probably, could take in two years more than thirty of the total one hundred and forty units supposed to be offered. A slow pupil could take perhaps not to exceed twenty, while an excep-

tionally strong pupil could take forty. What requirements shall we make, what advice offer, and what liberty allow, to our junior high-school pupil confronted by the above curriculum?

First, let us repeat that our attitude towards the alpha units should not be the same as that towards the beta units. If the beta units are taught (or, better word, offered) with due regard to appropriate pedagogical principles, we may experience difficulty in keeping pupils from them, or at least some of them. They should prove inherently interesting to children as do play, the "movies," sports, and certain kinds of fiction, or as the opera, fiction, travel and association prove attractive to adults. On the other hand, the alpha units present, in the main, the characteristics of the harder work of the world. The interest with which they are pursued must often be a derived interest—derived in some cases, even, from fear of punishment, or fear of forfeiture of desired approval, or from love of gain or approval. Hence it can at the outset be asserted that prescription will be much more necessary in the case of the alpha than of the beta units.

Let us assume that a careful study of the capacities of average children of twelve to fourteen years of age, coupled with an equally careful study of the objectives, individual and social, which should be realized through their education, shows that it is expedient and desirable that their two-year programs could and should include substantially fifteen alpha units and fifteen beta units. We might then establish the following rules to govern the making of individual courses:

(*a*) Any pupil deficient as to spelling, writing, and silent reading shall be required to take these alpha subjects.

(*b*) Every pupil shall elect four alpha units in English expression, in addition to those required under (*a*).

(*c*) Every pupil shall elect at least six units designed to provide a definite course in one of the following fields, —(*a*) foreign language and mathematics; (*b*) commercial arts; (*c*) industrial arts (boys); (*d*) household arts (girls); (*e*) agricultural arts.

(*d*) No pupil shall have fewer than fifteen or more than twenty alpha units.

(*e*) Every pupil shall elect at least ten beta units.

CHAPTER III

READJUSTMENTS OF CURRICULA: HIGH SCHOOLS AND VOCATIONAL SCHOOLS

I. CERTAIN FUNDAMENTAL DISTINCTIONS

As measured in terms of public interest and support, secondary education has been, during the last three decades, very dynamic. As measured in terms of adaptations of curricula to social needs, improvements in methods of teaching, and adequate training of teachers, the reverse seems largely true. Attendance in high schools has increased three times faster than population. Public money has been generously supplied for buildings and equipment. Parents have widely exhibited desires to have their children share in some of the supposed advantages of high-school education. But curricula have changed little in the last thirty years. Methods of teaching the standardized subjects have advanced but slightly. Few indeed of the 50,000 high-school teachers of the United States can, as yet, be said to have been professionally trained for their work.

But changes, perhaps of a sweeping character, are impending. Demands for school-supplied vocational education to supplement general education have brought complications, some upsetting of traditions and perhaps some new light. The psychologists have disturbed our inherited faiths in certain panaceas of mental, moral and perhaps physical, discipline.

As a means of setting forth compactly the writer's present tentatively held convictions as to probable early

developments, the following brief of conclusions and theses is submitted:

It is of the utmost importance to American education at the present time that there be established and documented by competent authorities the necessary distinctions between vocational and general education as these affect the training and instruction of young people from twelve to eighteen or even twenty years of age.

1. Our secondary schools have always been assumed, in a vague and theoretical sense, to discharge some functions of vocational education. Superficial observers and thinkers have been confirmed in their beliefs that this was so by the observed fact that these schools, as selective agencies, have brought to the front and into a spirit of self-confidence those whose native abilities and favoring extra-school environment have predestined them to choose, and to succeed in, the best vocations and eventually to win to leadership in them.

But in no true sense have secondary schools of general education (Latin schools, academies, general high schools) ever been vocational schools. Their controlling aims have obviously lain in the fields of general or liberal education (including mental training), however inadequately they may have realized these aims. Even so-called commercial departments, measured in terms of time given and results achieved, have rarely been more than 20 per cent. solutions of vocational education; while in agricultural, home economics, and even manual training departments, genuinely vocational ingredients have rarely exceeded 10 per cent. and have often fallen to a very sobriety-insuring 2 or 3 per cent.

2. But the time has arrived when secondary education (as a whole—vocational and non-vocational) should become in reality more democratic, more functional, and

therefore more purposive and definite. A total scheme of direct education for youths from twelve to eighteen should include many and varied opportunities for general (physical, cultural, social) or liberal (cultural and social) education, as well as for vocational education. But there should be no confusion in the minds of educators, parents, employers or pupils as to which is which. Such confusion now exists in great measure and is often induced, aggravated, or at least permitted by some selfish, and by some misguided, educators. Criticism of make-believe or gold-brick vocational education is justified less, if anything, on the grounds that such education is ineffective and misleading as vocational training, than because its presence and the interest it awakens actually prevent the discovery and application of means of genuine liberal education.

3. Vocational education in and through schools (in each case specially adapted to the requirements of the occupation for which preparation is being given) we are clearly destined to have in endless varieties during the next few years. Most forms of that vocational education (*e.g.*, locomotive engineering, shoemaking, cooking, farming, lumbering, seafaring, salesmanship, homemaking) cannot be carried on in ordinary school buildings (although some minor related technical or social studies can be brought to class rooms), nor through forms of school organization (equipment, faculties, supervision) as customarily designed for general education. Hence, in general, it would prove desirable for youths to stay as long as practicable in full-time schools designed for general education and then (except for continuation-school attendance) to turn sharply into full-time vocations or, preferably, into full-time vocational schools, or into schemes whereby half-time is spent in productive wage-earning work in the vocation and half-time in a vocational

school of closely related subjects. For some meagerly endowed or supported unfortunates, this transition from the full-time school of general education may have to take place as early as fourteen years of age; for other persons, better favored, it will normally be at sixteen; for still others at eighteen; and for an elite minority at twenty or twenty-two. For all vocational workers, of course, young or old, a portion of non-working time—the required continuation school hours of Pennsylvania, evening hours, holidays, vacations—should be given to furtherance, with or without public aid, of cultural and civic powers and appreciations during as many years of early participation in vocations or vocational education as may prove practicable.

2. OBJECTIVES OF "GENERAL" CURRICULA

The general or ordinary high school, as well as the coming junior school or junior high school, should have as its primary aims physical, cultural and civic education. These schools should make no attempt to prepare for specific vocations. But vocational guidance and various of the practical arts may legitimately be introduced when it is evident that these contribute better than anything else to the realization of some of the legitimate and defined ends of physical and liberal (cultural and social) education. (For the rest of this paper the term "general education" will be used, in contradistinction to vocational education, to include physical, cultural (in the more personal sense) and social (civic as well as moral—that is "large group" as well as "small group") education. The term "liberal education" will include cultural and social education only. The term "high school" will include junior high schools but exclude vocational schools.)

A large proportion of the offerings of typical Amer-

ican high schools now contribute little of substantial value to any phase of general education. In other words, judged by reasonable standards, these schools are only from 10 to 50 per cent. efficient. For a few of their pupils, they may, of course, realize more valuable results. For example, for pupils who leave after one year of English, algebra, French and ancient history, the high school may be only 5 per cent. efficient; while for pupils who, endowed with excellent intellectual interests and stirred to make good records, go to college, it may be 50 or even 80 per cent. efficient.

1. The standards upon which the foregoing crude estimates are based, are, of course, for the present personal and largely subjective. But it is believed that if we analyze the qualities of those men and women of thirty to forty years of age who, by consensus of judgment of competent observers are persons of "good" personal culture and citizenship, we shall discover in them many civic and cultural powers and capacities, self-produced, which schools of liberal education could and should produce in many, but which they now seldom, if ever, develop.

2. Furthermore, it is obvious that in the case of many, if not most, high-school pupils a considerable number of studies to which they devote the most effort probably do not "function" at all along the lines properly designated as "liberal education." Of what cultural or civic value for girls is most algebra, as now studied? Latin? French? Ancient history, or even medieval and modern history? Physics? Classical English literature? On the basis of what tokens of enduring interests, cultural ideals, well-informed minds, elevated tastes, persisting devotion to the "enterprise of learning," can it be contended that any of these studies are "functional" for all or some boys?

3. IMPROVING LIBERAL EDUCATION

Any effective revision of high-school studies for purposes of effecting better liberal education should, the present writer contends, involve acceptance of these principles:

(*a*) The abandonment of mental discipline as a primary aim in or through any study.

(*b*) Recognition that certain subjects or well-defined portions of traditional subjects (hereafter called "B class" subjects) should be utilized as educational means primarily because of their stimulus to, or enrichment of, growth or development of a relatively informal and therefore, in one sense of the word, "natural" (as opposed to strictly guided, cultivated or artificial) character.

(*c*) Recognition that certain other subjects or parts of subjects (hereafter called "A class" subjects) should lead very directly to powers and capacities, known to be of use to the individual in adult life, or to the society of which he shall be a part.

(*d*) Recognition that, whereas the primarily valuable objectives of vocational education are in general to be found in powers of production of valuable goods or wealth, the true objectives of liberal education are to be found primarily in improved capacities for utilization.

1. Mental disciplines of endless specific varieties (in any comprehensive and genuine sense "discipline of 'the' mind," or even "training of 'the' memory," "training of 'the' imagination," "training of 'the' attention" are largely mystical and illusory objectives) may be accomplished through school education, but chiefly as by-products of the pursuit of ends otherwise primarily valuable. The "generalization of these disciplines" into principles and ideals is a process the methods of which

seem to be largely unknown as yet. As supplemental, school subjects in mental science should be included—studies of mental processes and results (simplified, concrete, "case" psychology, as little subjective and as greatly objective as practicable).

2. "B class" studies, subjects or pursuits are those primarily which we follow, and to the degrees only which we follow them, because of innate or easily stimulated desire. Physical play of children, the exercise of natural curiosity, games and sports, moving pictures, interesting fiction, craft pursuits, hunting, travel, social singing, accounts of adventure, music sought after—these are a few examples among children and adults. Few would now contend that these are not educative; but it is only in the lower grades that we have frankly and honestly included them among the ends that schools should value and seek to promote.

But the concrete outcomes of these interests and pursuits are rarely visible. When we adults read good novels we can rarely detect specific increments of power or capacity resulting from our enjoyable and play-like pursuit of these interests; nevertheless, we are satisfied that we have been enriched and bettered thereby, just as we feel that travel or the sports of childhood usually contribute to physical, moral and mental growth, development, fulfilment, self-realization.

3. "A class" subjects or pursuits are those made necessary by the conditions of civilized life. The powers required in them may be very alien to our "natural" or more nearly instinctive life, may be very "artificial," in fact—the artificial requirements of the culture, moral behavior, and vocational proficiency imposed by civilization. Handwriting, spelling, foreign language (as learned by mature persons), nearly all high-grade vocations, the

rendering of good music, the products of physical, military and vocational drill when these are "hard"—these are examples of A class subjects.

The pursuit of A class subjects usually requires hard work. Should this hard work be imposed or induced unless the value of the product to the worker or his society is reasonably well known and certain of realization? Probably not. Time and energy are limited enough at best, and the world is full of "hard" things necessary or desirable to be learned which we now forego. This consideration gives point to the query as to why girls should be induced or required to work "hard" on mathematics or boys on Latin. Of course, no one assumes that it is intended that they should do this uselessly; but the usefulness of most of the required hard work in these subjects is not yet a matter of demonstration.

4. The importance of some form of differentiation among the various subjects now making up curricula lies in the fact that if objectives are unlike, methods will necessarily be unlike also. It is obvious that, as regards B class subjects, very large flexibility is possible and that methods of approach and attack resemble more nearly those characteristics of play or amateur activities in the extra-school world; while in the case of A class subjects, some, in very definite form, must be required of all, and others made the hard and inflexible conditions of admission to vocations, higher types of schools, etc. The methods employed for the mastery of these must resemble those prevailing in the world of productive work.

4. PROBABLE CHANGES IN CURRICULA

The following changes in existing subjects are expected to result as a consequence of the acceptance of the principles suggested above:

1. Mathematics for the first six grades, and, possibly, to a trifling extent in grades above should be an A class subject designed wholly and only to prepare the learner for utilization. It should be "consumers" mathematics, which must necessarily be unspecialized. But all ordinary mathematics above "consumers" mathematics should be offered only as vocational prerequisites or accompaniments, strictly A class, and differentiated and specialized to the demonstrated requirements of the expected vocation for any given individual. Certain vocations may, of course, be prescribed under some social conditions—*e.g.*, the temporary vocations of defending the flag—in which case, inevitably, the needed mathematics would be prescribed; otherwise it would be as elective as are usually the choices of vocations.

2. In the grades and as far as practicable throughout the secondary-school period should be available offerings of science on a B class basis. "General science" is trying to become that now—even though tradition tugs hard at the coat-tails of those who are seeking to bring it forward.

But for youths from fifteen upward there should also be A class offerings of prevocational science, known to be functional in expected vocations—engineering, homemaking, farming, machine shop practice, etc. Of course, school masters who are worshippers of the "logical order" and of "mastery of principles" first, will not see any difference between prevocational sciences for machine-shop workers and for homemakers; but a wiser generation may be expected soon to appear.

3. English language studies will, with rare exceptions, be of the A class. Language acquisition as a part of growth (B class) is most active from one to six years of age. Further powers of speech—correctness, powers

for particular purposes—will come usually as results of drills, tasks imposed, all in pursuit of definitely foreseen and evaluated ends.

Most forms of written language study will belong to the A class and conspicuously, of course, those taken towards vocational ends.

4. The learning of a foreign language during tender years—from two to five at least—is naturally a B class subject. But in youth or maturity it will doubtless have to remain as A class work—to be undertaken seriously and to be pursued as " hard work " towards clearly defined ends of positive achievement.

5. It may well be doubted whether English literature should ever be pursued as an A class subject. The blight on literature teaching now is the blight of formalism, of prescribed works, of unnaturally analytical methods. Let us throw English literature as an A class subject out of the high schools, and try to develop a B class subject in the same field.

6. History and various social science studies should be merged, and for the resulting subjects two sets of objectives should be developed—one in the field of cultural education and the other in the field of social (and especially civic) education.

All of the offerings for cultural purposes will be of the B class. Many of the offerings, especially to the younger pupils, for civic purposes will also be of the B class. A few offerings (" short unit courses ") to older pupils—formal chronological courses in essentials of history, methods of using historical materials, courses in principles and facts of civics, economics, etc.—will properly be of the A class.

7. Practical arts courses, especially for youths under

sixteen, will certainly be of the B class where in wide range of choice, flexibility of projects, and easy cultivation of interests, tastes, etc., will control.

But all genuine vocational education will, from the start, be definite, very specific, hard, with clearly marked objectives, and characterized by rigid methods. Manifestly its subjects of practice and study will usually be of the A class.

8. Some new subjects are required in secondary schools of liberal education. "Mental science," general in character and for appreciation chiefly, corresponding to "general nature science," is one of them. B class courses in art appreciation, current events, community civics, international relations, social behavior and various aspects of hygiene are greatly needed.

5. ADMINISTRATION

In administration of courses of liberal education in schools the following principles should prevail:

1. Every pupil should be expected to give a portion of each school day (let us assume it to be eight hours in length) to "hard" intellectual work—which time, therefore, should be devoted to A class subjects. Likewise, he should be expected to give part of each day to high-grade physical, intellectual or social play—athletics, fiction reading, visiting good theaters, practicing pleasant handicrafts, taking part in amateur theatricals, etc. He should be permitted as wide range as practicable and very free election among these B class subjects, and also within the materials of each. If he cannot make a full and suitable schedule by election, he should be put into an "awkward squad" for A class drill for deficients.

2. No pupil should be allowed to remain in a group

pursuing B class objectives unless he conform well to the requirements established on behalf of the group as regards spirit, coöperation, application, etc. Admission to a B class group or class should be regarded as a privilege. For misfits who cannot adapt themselves to these conditions "awkward squad" drill groups should be provided—as they are now in private schools for boys who do not elect any of the "going" lines of sports or athletics.

CHAPTER IV

THE HIGH SCHOOL OF TO-MORROW

I. THE PRESENT SITUATION

THE American high school is a young giant, now passing rapidly through his years of early adolescence. What will he be like, say, in the year 1925, when, one may expect, he shall have attained his majority? In what essential respects will he differ from the youth of to-day who has not yet found himself, in spite of his great physical size, who is still closely tied to his mother's apron strings (for, in a way, the college has mothered him), and who, notwithstanding his occasional freakishness, is still bound largely by the customs and superstitions of the youth reared in the atmosphere of mediævalism?

In forecasting possible developments of secondary schools, let us keep in mind chiefly the urban or suburban community. The country high school, like its prototype, the country elementary school, is unavoidably for the present, the Cinderella of the secondary-school sisterhood. We all hope that the prince bearing gifts will sometime find the rural high school, but for the present we cannot even be certain that he is on the quest. During the next decade it is clearly in those communities where many people live not too far from each other that we may expect experimental changes in secondary education to be launched, and permanent modifications to become established. At the risk of seeming unjustifiable dogmatic, let us hazard guesses as to what some of these will be.

The high school of to-day (as we personify it) thinks of its responsibilities chiefly in connection with the best

fourth or best third of the children of the community who have completed the eight-year elementary-school course and who are usually from fourteen to eighteen years of age. But, beginning with the segregation of children from twelve to fourteen years of age into the junior high school, we shall probably bring within the general scope of secondary education all schooling suited to youths from twelve to eighteen years of age, whether general or special, liberal or vocational. There is, in reality, little to distinguish secondary from elementary education in purpose or kind—the differences are chiefly in degree only. Most of the distinctions between elementary and secondary education which we try to incorporate into educational theory are factitious and unhelpful. In the secondary school of 1925 we shall doubtless be teaching some children of even fourteen or fifteen years of age the rudiments of reading and writing and number, but, because of their age, we shall minister to their educational needs in special classes in some type of secondary-school class, instead of placing them in lower schools with younger children.

The high school of to-day thinks of its *certainly attainable* purposes chiefly in terms of the mastery of certain forms of highly organized knowledge, and in strict accordance with certain traditional standards as to what constitutes such mastery—capacity for verbal reproduction, performance of definite exercises, etc. It also dreams freely of other purposes not so proximate, and of greater permanent significance—the training of mind, the ennobling of character, the in-breathing or evoking of persistent cultural interests, the kindling of the civic sense and the like. But in large part these dreams now give us only castles in Spain. Like the enterprises of poor Colonel Sellers, the big aspirations which we cherish on behalf of

our secondary schools sound well by the fireside or as the subject matter of after-dinner speeches; but in the cold light of day they guide us very little in the actual tasks planned or under way in the teaching of Latin, German, English, physics, ancient history, algebra, mechanical drawing, lathe-work, or commercial geography.

2. ANTICIPATIONS

By 1925, it can confidently be hoped, the minds which direct education will have detached from the entanglements of our contemporary civilization a thousand definite educational objectives, the realization of which will have demonstrable worth to society. It will be found that many of these can best be realized through the medium of some type of secondary school or class therein. In defining and giving comparative valuations to these objectives or purposes or goals we shall, of course, take account in due measure of the possible and the desired well-being of the individual as well as of the society of which he is a member; of the native powers, interests, and probable future opportunities of the learner; and of the by-education resulting from, or to be procured through, such social non-school agencies as the home, the church, the workshop, community contact, and the like.

Educational objectives worthy of a place in publicly supported secondary schools will have been found to be of many kinds. Some of these will center chiefly in the promotion of physical well-being—to be realized through the establishment of right ideals of health, strength, and endurance; the imparting of needed instruction in hygiene and sanitation; and the training in habits of posture, activity, and restraint. We get glimpses of the possibilities in this direction even now, but they are only glimpses. What is the significance to the educational programs of

the future of the results on physique and health of the forced training and the exposure endured by the millions of recruits in the late war? How far are we yet from a realization of the cost to the physical womanhood of this country of our specialized nerve and brain drill in schools?

Again, some of our objectives will center definitely in cultivation of specific personal intellectual and æsthetic interests—the resources wherewith we enrich our leisure time, our individual lives. In view of their ostensible aims, the high schools of the present should be doing more along this line than is now actually the case. They should at least establish abiding cultural interests—appreciations, tastes, enthusiasms, even hobbies—in literature, science, foreign languages, and history. Surely the high school of 1925 will be doing this? Surely it will take the necessary means to insure that all those who have felt its influence will somewhere in the world's multifarious cultural possibilities find *leads* which may grow into vital personal interests of a high order, give rise to avocational activities, and entitle the possessor to rank with cultivated men in some field. In music, literature, social science, natural science, history, travel in foreign lands, the practical arts suited to the amateur handicraftsman, politics, drama, the moving picture—in most, if not all, of these directions we may expect the school to offer openings to be made available to each learner according to his leanings, his capacity, and his possibilities of largest self-development.

A third class of objectives will be evolved in connection with the direct and purposive development of young people toward the standards of civic habit, knowledge, ideal, and the resulting behavior which befits the member of the social group, the citizen of the state in the twentieth century. Call this form of education moral, civic, ethical,

humane, religious, social—in greater or less degree, it is each and all of these—it is certain that in the complicated social life of the age upon which we have already entered we must have it in ever greater measure if we are to survive. It must include the formation of certain fine social habits and attitudes which the by-education of agencies other than the school has not given; it must include the giving of much of the social knowledge which is necessary to guide us aright in the jungle of modern social life; and it must be strong in the cultivation of a variety of right sentiments and ideals. But it must do much more than train (in the specific sense), inform, and inspire; it must provide for action, for achievement, for social control, for government, for social work, within the reasonable capacities of the adolescent learner. The activities of the Boy Scouts, of youthful camping parties, of voluntary organizations and self-governing groups in schools now suggest some of the possibilities in this direction. But we shall have to multiply new openings. Here must begin the service activities for political participation, for defense, for business coöperation, for accumulation and use of capital, for the reform of anti-social individuals, for the coöperative support of the handicapped, and for the pioneering of new constructive effort. We can take for granted the disposition of all adolescents to become good and approved and progressive members of society, but we must kindle to the utmost the motives and vitalize the sanctions that, for these younger people, give depth and reality to their social education. We shall find it practicable and desirable to make more of appeal to the spirit of fair play, to the sense of personal loyalty, to the jealousy of personal honor, to the desire for success, to the altruistic, and to the religious sentiments than we have been doing heretofore, and we shall learn how to do it in

each case without provoking self-consciousness and opposition, or permitting indifference and "slacking." The high school of 1925 will have learned how to give "backbone" to moral and social education, as, in some degree, the Y. M. C. A., the boys' clubs, the Boy Scout leaders, and the conductors of camps have already done. But it will find also that many of the best results of social education are to be developed, not in the shape of specific habits, definite knowledge, and vigorous activities, but rather as kindled appreciations, refined sentiments, and uplifted ideals. For all this, pedagogical methods have yet largely to be devised.

Finally, we must expect that opportunities for vocational education in endless variety will evolve under, or in connection with, the secondary schools of 1925. Until the economic and domestic basis of our present civilization changes radically it will be inevitable that the majority of our boys and girls will desire and will be obliged by circumstances to enter upon self-supporting work somewhere between the ages of fifteen and eighteen. For many of these it will be found that specific vocational schools designed to give, or, at any rate, to supervise their initial vocational education will be of the utmost importance. Some stages of habituation and of experience looking to direction (foremanship) may well be left to the by-education of shop, office, and farm. The exact relation of the vocational school to the school of general or liberal education cannot now be foreseen, but in all probability it will somewhat resemble the relation of the college of vocational education to the liberal arts college in the American university. Certainly these vocational schools, whether making "full-time" offerings (that is, undertaking all three phases of vocational education—practical participation, related technical study, and general studies

related to the vocation) or only "part-time" offerings (evening schools, continuation schools, etc., supplementing the learning acquired in the commercial pursuit of a vocation), will be closely linked up with the occupational fields for which preparation or further training is being given. If these occupations are found in productive industries occupying partially segregated districts, then, doubtless, the full-time vocational schools will also be located in these districts.

Probably *vocational* education and *general* education (including under the latter *physical, social,* and *cultural*) will not be blended or fused in the efficient secondary schools of 1925, as seems to be the case now in certain quasi-vocational schools ostensibly making offerings of vocational instruction or training as elements in a modified scheme of general education (actually they give only "denatured" vocational education). All signs point to the conclusion that in 1925 the person learning a vocation in a school will organize his time and expend his energy much as does now the approved employee in home, shop, or office, or on the farm, on the road, or on shipboard—he will give from seven to ten hours of "the heart of the day" to his vocational pursuit (practice and learning) and his remaining waking hours (and holidays) to recreation, the furthering of personal culture, and the discharge of his civic and other social responsibilities.

In addition to definition of purposes the high school of 1925 will surely have made great advances over present practice as regards the definition of effective methods of instruction and training. For this purpose it will be essential to distinguish *kinds* and *qualities* of useful learning and to apply the distinctions thus made to the varied departments of human activity which we wish to improve or otherwise modify through our schooling.

For example, is it not desirable that pupil and teacher should know quite definitely and be in agreement as to when learning should result in well-assimilated knowledge, capable of instant application in the course of life's practical activities? Without doubt, secondary education to-day lacks a certain vertebral quality, a kind of hardness and firmness. Its results are vague, its graduates intellectually flabby to a degree that disturbs us. But, certainly, the way out of this difficulty is not that of simply making *all* studies hard, of setting more rigorous examinations, of "firing" weaker pupils, or of appealing to the sense of fear and the methods of "driving" generally.

As in all other fields of activity where high standards prevail, education must learn to discriminate the quality of the means which it employs to attain ends. We need "vertebrate" quality in secondary education, but we need much besides. Liberal education can better be defined in terms of appreciation, interest, or capacity for wise choice than in terms of power to execute, or to apply knowledge definitely. What are the pedagogic means of producing appreciation, taste, or interest over wide areas? We have much to learn here.

The high school of 1925 will probably be much more effective than is the high school of 1916 in training the mental powers of its pupils. For one thing, it will doubtless teach the pupils themselves something of mental science—at least to the extent of enabling them to appreciate the importance of keeping the complicated machinery of the nervous system in good running order, and the large possibilities of so training the powers of the mind that optimum efficiency shall be the outcome.

Quite certainly, however, the high school of 1925 will not be, as is the high school of the present, the victim of the quackeries, the cure-alls, the "luck stones," that came

into vogue in the ages of educational faith. In the dark ages of medicine it was widely taught and believed that some nauseous drugs, some awful concoctions of dead or diseased organic matter, were the indispensable cures for human ailments. In somewhat the same way the modern educational exemplars of the mediæval healer insist that some nauseous and unnatural studies, largely made up of dead matter, must be employed for the educational salvation of the young.

For all practical purposes the future high school will insist upon the fullest mental training as a necessary feature and expected by-product in connection with the pursuit of objectives otherwise worth while also. Conceivably, provision will be made for mental gymnastics, for "corrective" work, for very specific training on occasions when the need of that shall be apparent. But this will be something so different from our present unintelligent reliance upon algebra and Latin as chosen panaceas for the undisciplined mind that any comparison would be out of the question.

Will anything like uniform programs of instruction and training for large numbers of pupils be found in the high schools of the future except in the case of particular groups of studies and forms of practice designed to produce vocational efficiency in a given field? It is doubtful. The field of human culture is so large, its valuable prospects so many, that each learner, under wise guidance, will usually make his individual program, subject, of course, as is the modern university, to the administrative limitations of the institution to make many and varied offerings.

Hence, we may be certain that the large, rich, secondary schools of 1925, holding forth opportunities suited to all children from twelve to eighteen years of age, will

offer a wide range of activities, some of the "hard-work" order, some of the "high-grade play" order, and that no pupil will be debarred from making his own program except for weighty reasons, the burden of establishing the validity of which will rest upon the school. But it will be assumed that the guardians of the pupils, as well as the pupils themselves, are disposed to do the things educationally that will prove most profitable to them, and that advisory agencies will be found in the school to indicate what lines of study, of personal training, and of culture will prove most worth while. We may hope that the doctrine of the innate depravity of secondary-school students, as well as the doctrine of the incorrigible imbecility of their parents, will have been rendered innocuous, if not obsolete.

A special word may be said as to the probable place of science and mathematics in the high schools of 1925.

First, while absolute prescriptions will be rare, it will generally be expected that all students will give some time to reading, amateur experimentation, and field study, in a sufficient variety of fields of science to beget in them wide and generous appreciation of the part played by science in modern life. All the work offered with this end in view will be of the "*beta*" type.[1] It is to be hoped that students of educational psychology will have discovered satisfactory *means* (organized materials, reading-matter, opportunities for experimental work) and *methods* to make learning of this kind count toward *liberal* education when given under school auspices. At

[1] The reader should be on guard against confusing the *alpha* or "hard-work" class, and *beta*, or "high-grade play class," as here designated for the high-school curriculum with the classes of work designated by *alpha* and *beta* in the junior high-school curriculum. In the latter, the distinction between *alpha* and *beta* work was between that aimed to develop action or execution, and that aimed to develop appreciation.

present many of our pupils are left to the chances of general reading, the moving pictures, and personal associations to obtain an appreciative contact with the inspiring aspects of modern scientific achievement.

For the present we should devote our best efforts to the organization of a course—very flexible and very alluring—in general science for youths from twelve to fifteen years of age. One hopes that a similar course in mathematics could be evolved, but, with the traditions of that subject crystallized as they now are, the situation seems hopeless. Certainly, from the point of view of any sound theory of *liberal* education the thing is possible and most highly desirable.

Some branches of science and of mathematics offered as "*alpha*" units will, in the future high school, be designed primarily to serve as prevocational studies; that is, students anticipating entry upon certain mathematics- or science-using vocations will deliberately seek, as preliminary thereto, equipment in the shape of ability to use these subjects as instruments. Probably adherence to this primary aim will result in great modifications of these subjects from the pedagogic forms in which they now appear, and tribute must be paid to the large amounts of experimental and genuinely constructive work done in this direction by school men in and around Chicago.

Then, of course, some mathematics and some science, always in highly specialized and very directly "applied" forms, will appear in the various vocational schools clustering under the secondary-school organization of the future.

3. CURRICULUM PROPOSALS

Below is given a long list of the "subjects" divided into alpha ("hard work") and beta ("amateur," "high-

A LIST OF POSSIBLE SECONDARY-SCHOOL SUBJECTS FOR A "MODERN" HIGH SCHOOL

	Name of subject *	Alpha units	Beta units
I.	1. *English language:*		
	2. English grammar	1	
	3. English written composition	1 or 2	
	4. Silent reading	½ or 1	
	5. Voice culture	1	
	6. Oral reading	1	
	7. Public speaking	1	
	8. Rhetoric	1	
	9. General study of English	1	
	10. History of English language	.....	1
	11. Current usage	.....	1
II.	12. *English literature:*		
	13. American selections	.....	1
	14. Nineteenth-century English selections	.....	1
	15. Classical English selections	.....	1
	16. Contemporary fiction	.....	1
	17. Contemporary drama and poetry	.....	1
	18. Contemporary general literature	.....	1
	19. Historical review of English literature	.....	1
	20. Intensive study of selections	1	
III.	21. *Natural science:*		
	22. General science	.....	1
	23. Astronomy	.....	½
	24. Geography	.....	1
	25. Geology	.....	1
	26. Biology and evolution	.....	1
	27. Natural history of man	.....	1
	28. Physics	1	
	29. Chemistry	1	
	30. Biology	1	
IV.	31. *Social science:*		
	32. Community civics	½ or 1	½ or 1
	33. Study of nations, historical and contemporary	.....	1
	34. Essentials of social science, with materials for historical perspective	1	1
	35. History, American	1 or 2	1 or 2
	36. History, general	1 or 2	1 or 2
	37. School government, practice	.....	½
	38. Electoral government, national, state and local, including voting	½	½
	39. Social ethics	.....	1
V.	40. *Mental science:*		
	41. General mental science	.....	1
	42. Methods of study	½	

* Figures at left refer to explanatory notes at end of section. A "unit" has the same value as a "Carnegie unit."

A LIST OF POSSIBLE SECONDARY-SCHOOL SUBJECTS FOR A "MODERN" HIGH SCHOOL—*Continued*

	Name of subject *	Alpha units	Beta units
VI.	43. *Mathematics:*		
	44. General mathematics	.....	1
	45. Algebra	1	
	46. Plain geometry	1	
	47. Trigonometry and solid geometry	1	
	48. Prevocational arithmetic	1	
VII.	49. *Classical language and literature:*		
	50. Classical language and literature, general	.....	1
	51. Latin in relation to English	½	
	52. Latin language	2	
	53. Greek language	2	
VIII.	54. *Modern language:*		
	55. German reading	1 or 2	
	56. French reading	1 or 2	
	57. Spanish reading	1 or 2	
	58. Russian reading	1 or 2	
	59. Spoken German	1 or 2	
	60. Spoken French	1 or 2	
	61. Spoken Spanish	1 or 2	
	62. Prevocational Spanish reading	1	
	63. German literature	.....	1
	64. French literature	.....	1
IX.	65. *Graphic and plastic art:*		
	66. Drawing and painting, amateur	.....	1 or 2
	67. Mechanical drawing	1 or 2	
	68. Illustration, amateur	.....	1 or 2
	69. Design, 2d and 3d dimension, amateur	.....	1 or 2
	70. Design, prevocational	1	
	71. Art appreciation, historical and contemporary	.....	1 or 2
X.	72. *Music:*		
	73. Chorus singing	1	
	74. Individual vocal	1	
	75. Individual instrumental	1	
	76. Band	1	
	77. Musical appreciation (including historical)	.....	1 or 2
XI.	78. *Physical education:*		
	79. General hygiene and sanitation	.....	1 or 2
	80. Play, games, field sports	.....	1 or 2
	81. Individual corrective exercise	1	
	82. Rifle team and hiking	1	
XII.	83. *Vocational guidance:*		
	84. General reading-course	.....	1
	85. Tests for vocations	1	

* Figures at left refer to explanatory notes at end of section. A "unit" has the same value as a "Carnegie unit."

A LIST OF POSSIBLE SECONDARY-SCHOOL SUBJECTS FOR A "MODERN" HIGH SCHOOL—*Continued*

	Name of subject *	Alpha units	Beta units
XIII.	86. *Practical arts:*		
	87. Agricultural arts	.....	1 or 2
	88. Industrial arts	.....	1 or 2
	89. Commercial arts	.....	1 or 2
	90. Household arts	.....	1 or 2
XIV.	91. *Vocational training:*		
	92. Machine metal work, practice (school, commercial shop)	4 or 8	
	93. Machine metal work, technical	2 or 4	
	94. Machine metal work, informational	.....	1 or 2
	95. Machine metal work, part time in private shop	4 or 8	
	96. Machine metal work, technical (school)	½ or 4	
	97. Machine metal work, general	1 or 2	
	98. Gardening, home farm practice	4 or 8	
	99. Gardening, technical (school)	2 or 4	
	100. Gardening, informational (school)	.....	1 or 2
	101. Counter salesmanship (private shop practice)	4 or 8	
	102. Salesmanship, technical (school)	2 or 4	
	103. Salesmanship, informational (school)	.....	1 or 2
	104. Homemaking, practice (private home)	4 or 8	
	105. Homemaking, technical (school)	2 or 4	
	106. Homemaking, informational	.....	1 or 2

* Figures at left refer to explanatory notes at end of section. A "unit" has the same value as a "Carnegie unit."

NOTE.—Repeat for other vocations, such as: house carpentry, printer, painter, fireman, teamster, electrical worker, weaver, shoemaking specialist, etc.; farmer, stock raiser, farmhand, florist, horticulturist, etc.; stenographer, bookkeeper, field salesman, clerk, file clerk, etc.; wage-earning domestic, "mothers' helper," children's nurse, waitress, etc.

grade play") classes, which will possibly be considered by the school authorities of 1925 in determining the offerings which it is feasible for a particular school to make. It would be easy to add to or otherwise modify this list according to one's perconception as to things "educationally most worth while." Until we possess a more adequate educational psychology, and especially sociology, we shall, of course, have few satisfactory criteria as to the "worth whileness" of these or any other proposed members of secondary-school curricula.

The measures indicated by the figures in the columns on the right ("Carnegie units") have little validity, of course, and are included merely to suggest the desirability of eventually evaluating all these studies somehow in terms of the amount of time and—it is to be hoped—effort which should properly be given them.

EXPLANATORY NOTES

1. *English language* is the term here used to cover all forms of oral and written expression and of apprehension on a technical basis, such as silent reading.

2. A technical study, especially of the principles of fundamentally good writing and reading—probably different aspects of the same subject. It may be assumed that the correction of solecisms of speech will be made independently of this study.

3. The subject as ordinarily understood.

4. A subject not now developed, but which offers much promise and is capable of having developed a technic of its own.

5. Results to function especially in speech and oral composition.

6. A specialty for those desiring effectiveness in this department, either for socially decorative or for practical purposes, *e.g.*, prospective teachers.

7. To cover a wide range—speaking to several persons simultaneously or addressing large audiences.

8. Like grammar, a formal study of principles for the sake of good writing and reading.

9. A systematic general study of elements that enter into the effective use of English. Intended as an alternative for those not electing two or more of the subjects already named.

10. Purely an appreciative study, based upon lectures and the reading of choice works.

11. An appreciative study based chiefly upon good usage of English by contemporary writers and speakers, bringing out especially their distinguishing qualities.

12. To cover all phases of literature in the vernacular. The actual objectives of this study are not yet clearly defined, but our faith in its possibilities is strong. As a matter of fact we shall ultimately classify the objectives of the study of English literature under three heads: (*a*) informational and historical, (*b*) for purposes of æsthetic appreciation, and (*c*) for purposes of socialization and character building.

13–19. Appreciative studies in the fields indicated, all elective, with, perhaps, requirement that not less than two shall be taken by every student. Few selections should be prescribed for all pupils alike. Much individuality should be allowed, and teaching is to be largely by way of conferences following readings by pupils.

20. Intensive study of one or more selections to obtain mastery of method of analytical study of English literature.

21. Objects of natural science teaching should probably be threefold: (*a*) appreciative insight into phenomena of environment, (*b*) mastery of distinct fields for prevocational purposes and interest in sympathetic study, and (*c*) scientific method which should be a by-product of all the teaching, it being remembered that scientific method has its appreciative as well as its executive aspects.

22–27. Appreciative studies based upon amateur motives of research and doing, and utilizing general reading, lectures, etc.

28–30. Systematic studies intended to be prevocational for some and to satisfy the demands of those who desire or on whose behalf—*e.g.*, college admission—is desired rigorous study.

31. Social science includes historical studies, but it is assumed that history starts with analysis of social science as based on contemporary life.

32. One-half unit of rigorous study of facts, with a view to their application of the results of such study, and one-half unit of appreciative reading, etc.

33. An appreciative study.

34. Contemporary situations of social science studied, after which careful study of historical antecedents.

35–36. Courses resembling those now found, but divided into the two phases.

37. The practice of school government by pupils willing to take an active part in official action, leadership, etc.

38. Systematic study in part, appreciative study in part.

39. Appreciative reading.

40. A proposed study, undeveloped as yet in secondary education, but of utmost importance.

41. An appreciative study of phenomena and their interpretations as far as the pupils can go.

42. Systematic study of methods of effective learning.

43. An appreciative study of the part played in modern life by mathematics.

44–48. Studies designed to effect permanent mastery.

49. Classical languages and literature. Studied chiefly from the point of view of contributions to liberal education.

50. An appreciative study of the place of classical language and literature in history and in the foundations of the English language.

51. A study not yet developed, but analogous to word analysis as formerly studied.

52–53. Definite language studies, with a view to certain prescribed forms of mastery.

54. It is assumed that the objectives to be kept in view will be more clearly defined than is the case at the present time in modern language teaching.

55–62. Definite forms of mastery in accordance with preëstablished standards.

63–64. Appreciative approaches on the basis of forms of literary presentation not yet organized, doubtless using translation chiefly.

65. Chiefly designed to contribute to the ends of liberal education.

66. The amateur and appreciative basis to be emphasized.

67. Prevocational usages contemplated principally.

68–71. Self-explanatory.

72–77. Self-explanatory.

78–80. Quantity might be prescribed, but particular forms left optional.

81. Prescribed and routine work required.

82. Subject may be elected, but once chosen, definite efficiency should be the outcome.

83–84. Self-explanatory.

85. A course of tests for pupils interested in particular vocations might be prescribed, perhaps to be called "prevocational training."

86–90. All of these studies placed on appreciative basis. The method is assumed to be one of intensive sampling and largely based on individual interests. Might be utilized sparingly for vocational guidance.

91–106. A particular trade must be selected, then provision made for practical instruction in it, followed by provision for technical instruction. A distinction is suggested between practical instruction in schoolshop which might occupy, primarily, a period of from one month to two years, followed by transfer of learner to commercial shop where part of time is reserved for continuation school or part-time school attendance.

In the case of any particular occupation a study on the appreciative basis of the more cultural aspects should be provided also.

CHAPTER V

THE ESSENTIALS OF LIBERAL EDUCATION WITHOUT LATIN

I. OUR EDUCATIONAL SHORTCOMINGS

LET us, with something of the resolution with which we met the stern realities of war, also recognize that as a people we are deficient in the standards and attainments of liberal education as these are required to live up to the position and responsibilities which are sure to be ours in the twentieth century, as a result of this war; that ours is a conspicuously superficial culture; and that our ideals and our insight, where the genuine humanities of our day are involved, are in many essential respects lacking in depth and sincerity, and especially in the qualities of reality. As certainly as we watched from a distance the storm mount and finally sweep us into its depths while we trembled in apprehension and irresolution, so certainly shall we again and again find ourselves in the near future unready to meet the new world problems that are inevitably to confront us. We are seriously unprepared for our coming part in diplomacy, interchange of knowledge, and the promotion of constructive programs making for international coöperation and friendliness.

How many among us can use a foreign language with precision and effect? To whom shall we look when we seek spokesmen to the Japanese, the Russians, the Chinese and the Brazilians? How few and how meagerly read are the books and journals that speak to our people of the profounder stirrings of government, social policy and economic enterprise in those lands whose destinies are

sure yet to be interwoven with our own! How little in any genuine sense do we yet appreciate the extent and character of the transformations even now steadily and rapidly taking place in the very soil from which spring those plants that we call art, literature, culture, religion, and democracy, because of contemporary diffusion and deepening of scientific spirit and method!

And yet in some respects we are the most extensively taught people in the world. In the public and private high schools of the United States are found to-day many hundreds of thousands of our most gifted and most ambitious boys and girls between fourteen and eighteen years of age. Our numerous colleges, founded close upon the heels of settlement in all our states, and especially colleges making no pretensions as to offerings of special vocational training, have long been crowded with young men and women, the finest products of our blended and prosperous people. America has not stinted in providing for aspiring youth the means of culture as that has been understood. In no other country has so large a proportion of young men and women been given the opportunities and incentives for all those studies which supposedly make for informing the mind and enriching the spirit—in other words, for humanism. Certainly, we can hardly rebuke ourselves for indifference, for deficiency of high intent, or for niggardliness of support in matters of what we believed to be liberal education. And it is just as certain, notwithstanding frequent allegations to the contrary, that the large majority of the hundreds of thousands of youth constantly seeking our higher schools and colleges, are not in quest, only, or even chiefly, of the education which they can turn to immediate practical advantage—in the narrowly utilitarian sense.

Nevertheless, in spite of good intentions and an abundant provision of material means, our agencies of liberal

education have, I believe, conspicuously failed to meet the needs of our nation in this age. They have left us in a state of intellectual and spiritual unpreparedness. Why? Largely, I contend, because those to whom we have entrusted the direction of our institutions of higher learning have had no adequate understanding of the meaning and character of liberal education as that must be developed for the needs of a dynamic civilization expanding and deepening into the twentieth century, a civilization carrying along growing aspirations for democracy, for harmony among peoples, and for profounder understanding of the essential things of the present and the future. At a time when all the vital elements of political, religious, economic and cultural life were being reshaped by forces of incomprehensible magnitude and complexity, many of our strongest educational leaders have continued to prostrate themselves before decaying shrines of the past. With good intentions, but bad performance, they have, in the name of an unsound psychology and a false pedagogy, constituted themselves the voluntary defenders of a static social order. With eyes aloof and minds closed to the realities of present and future, they have ever tried to hold the thoughts and aspirations of their disciples to the departed glories of a Greece or a Rome, to the culture of a thirteenth or sixteenth century, on the assumption that these, and these chiefly, exemplify the high and noble things of spirit and mind which should be the foundation of all fine learning suited to a modern world.

2. THE FETICH OF PRESCRIBED LATIN

For generations, and almost unto yesterday, they caused the dead hands of Latin, Greek and mathematics to hold in leash and often to paralyze the aspirations of our youth to share in the appreciation, and perhaps to aid in

the creation, of cultural products significant of our New World character and opportunities. Millions of American boys and girls, the best of our stock and of our democratic social life, have come gladly up to our schools, naïvely seeking the bread that would nurture them in the idealism and achievement of modern America; and to them has been given—what? Shreds and scraps of two complex ancient languages that were never to become really intelligible to most of them, and could not, in the very nature of the case, become more than slightly intelligible, except to a very few, and which were destined to be, in ninety-nine cases out of every hundred, almost completely forgotten within ten years of the closing of school life. Accompanying the prescribed and often meaningless studies of the grammar and composition of these languages, were also studies, hardly less pitiful, of classical texts, to the elucidation of which the less scrupulous students have helped themselves by the ever-ready interlinear. Hundreds of thousands of our youth have toiled reluctantly line by line through the Anabasis and millions have painfully translated Cæsar's Commentaries—splendid bits of composition in themselves, but about as significant to the realities of a nineteenth or twentieth century as bows and arrows would be in modern warfare, or Roman galleys in the naval contests of to-morrow. Our educational conservatives have been industriously trying to gather figs of liberal education from the thistles of the classics. They have turned their eyes so constantly backward that they have themselves eventually become incapable of seeing clearly the realities of present and future. They have never learned that the twentieth century was eventually due in education as it was obviously arriving in science, economic achievement, social economy, medicine, engineering, and agriculture.

It was inevitable, of course, that as America found itself politically, economically, and socially, it should try to free itself of the obviously useless trammels of the past. Classical studies in schools and colleges have therefore become more and more vestigial. Boys and girls by hundreds of thousands, and usually those of superior ability and home environment, still elect the skeletonized Latin offered in public high schools, because of the possibility that they may want to attend those strong, endowed institutions whose social connections, wealth and historic strength enable them long to resist the modernizing influences to which institutions more closely in touch with the spirit of the age and more responsive to the will of democracy have in part yielded. Almost universally in our private schools, and still quite generally in our public schools, American youth study and recite in perfunctory spirit the meaningless rituals of Latin grammar and Roman classic. But there rarely results any genuine interest in either the ancient language or its so-called literature. The wholesome common-sense characteristic of Americans soon asserts itself. Half contemptuous, half tolerant, and wholly uninterested, and an easy victim to the dishonesty of the "pony," the boy passes his antiquated tests for admission to the college whose social opportunities mean so much to him. He promptly relegates to the lumber-room of his mind the broken antiques with which misguided teachers have tried to equip him. The colleges (a steadily diminishing number, however), having exacted the ancient ceremonial observance, now usually permit the youth to proceed in freer ways towards his degree.

But if the study of Latin has degenerated to the vestigial position here indicated, why the strong opposition

manifested against it on the part of those who call themselves liberals in secondary and college education? The exactions of time and energy imposed by the stated amounts of Latin now required by even our more conservative institutions do not seem excessive. A minimum of from one to two thousand hours of study and recitation given out of the lifetime of an individual to an enterprise of learning with such honorable antecedents (in former centuries) as the study of Latin surely seems no great sacrifice. The college admission requirement against which we inveigh rarely demands more than one-fourth of the learner's time through a four-year secondary school course.

It ought to be obvious that, in the main, the motives of those who seek to remove Latin from the list of the specific prescriptions required for any high-school course, or for candidacy for any liberal arts degree are not founded on mere prejudice or utilitarianism. It is, of course, an easily made charge that the so-called opponents of Latin—who are in reality only opponents of the monopolistic position accorded at present to Latin—are interested only in bread-and-butter education, that they are lacking in devotion to the ideals of culture, that they are infected with the anarchistic spirit of the age which would cut loose from the moorings of established institutions and inherited traditions.

It is not part of my present purpose to reply to these criticisms. However well founded they may be in the case of a few opponents of Latin, they do not apply to the many students of education whose attitudes have been formed only as a result of extensive comparative study of the possible and desirable objectives of all advanced instruction and training.

3. LATIN AS A BARRIER

Those of us who disapprove the present protected position of Latin as a secondary-school study, a position made possible only by the requirements imposed by powerful institutions of higher learning, do so for the very fundamental reasons that, in the first place, the insistently repeated allegations as to the educational values of Latin as now taught are, in fact, without demonstrated validity, and that, in the second place, Latin, as an artificially protected study, stands as one pronounced barrier to the development of truly effective liberal education suited to the genius of the American people and to the needs of a twentieth century democracy. We contend that to give any study in a system of liberal education a sacrosanct and artificially protected place on half mystical and wholly traditional grounds is to corrupt the sources, and to invalidate the methods, of all true liberal education from the outset. The values pretended to be found in the study of Latin impress the scientific person who thinks in terms of present and future results as being like the meaningless mummeries and symbols of religious rituals that have long outlived the period of their vitality. These alleged values rest actually in part on old customs of little present worth, in part on mere stubborn devotion to the ancient for its own sake, and in part on the rewards always to be won by clever exploiters of the credulity of those whose faiths are easily enlisted in the ultra-modern or ultra-antique.

What curious defenses are still conjured up in defense of the classical studies and especially on behalf of that clinging "dead hand" study, Latin! All educators of any breadth of view appreciate the unequalled importance of the "humanities," those studies designed to lead the minds

and spirits of our growing youth to apprehend the things that have fine and big messages of human possibilities and achievement. In a broad and real sense the "humanities" are always to be cherished as vital studies in any plan of liberal education. But are we to delude ourselves into thinking that the slow and perfunctory dissection of a few classical works of literature, produced by great minds that lived in regions and times the thoughts, feelings, and aspirations of which are almost inconceivably far removed from ours, could serve, except in one possible instance in a thousand, to produce the kinds of insight and appreciation that are properly to be begotten of those studies which we may sincerely call the humanities?

Again, we are solemnly assured that through the study of these ancient languages and the few easily available examples of their literatures, there is produced a kind of magic mental discipline, a unique kind of sharpening of the mental faculties, not to be found in studies of other languages or literatures, nor in other subjects based on the realities of our own day and generation. As if the living gymnastics of mind were not best to be secured through those activities of mental and spiritual apprehension and action which come from strong efforts to possess and to control the realities of habit, knowledge, and ideal that have worth for to-day and for to-morrow!

We are told, too, in words of well-simulated profundity, that contemporary civilization has its roots in the old civilizations which flourished in the Italian and Grecian peninsulas, and that it is through study of the surviving desiccated examples of those cultures that our youth are best able to gain access to the more complex cultures of our own times. As if any sound system of pedagogy should or could have the unformed mind make its first

essays in fields that are so remote in time and place as still to be largely unintelligible!

We are also assured that some knowledge of Latin is essential to the mastery of English or of a modern foreign language. But here again we are given no evidence that makes allowance for the great selective forces operating in schools as heretofore conducted. Many a self-educated Lincoln or Walt Whitman has given us fine virile English; and certainly thousands who have made good records in Latin and Greek have later given us English that is but as hollow brass and tinkling cymbal. We know too little yet of the psychology of good language training to speak with confidence of these matters. If, as a partial result of the numberless hours given by our youth to the study of the classics since colonial days, we could point to prevalent forceful and fine vernacular usage as one accomplishment, and to some real mastery of modern foreign tongues as another, there would at least be ground for shifting the burden of proof to the opponents of the monopolies long accorded to Latin and Greek and still held by Latin. But, in reality, we exhibit among our college-educated classes no such achievements that are not equally to be attributed to the superior home environments and to the opportunities and exactions of the social positions of these more favored groups. Any critical analysis, even in the light of our present uncertain educational science, of the valuable objectives and useful methods of language training, either in the vernacular or in a foreign tongue, must always strengthen the convictions of common sense that direct investment of available time and energy in the positive and specific pursuit of the actual ends we desire is the best investment we can make.

Finally, we are told that students who elect Latin in our schools reveal themselves later as having better minds

than those who do not take Latin, and that as men and women they succeed better along almost all lines. But to those who realize the forces of selection always operative among parents and even among children themselves, the inferences usually drawn from these facts represent the baldest kind of reasoning "*post hoc ergo propter hoc.*" There is much evidence indeed that heretofore, and even yet, pupils electing courses containing Latin are natively superior to those who do not make such elections. Parents aspiring after the best for their children do not set themselves up as experts in determining values of studies. Naturally, they accept the judgments of the higher institutions, and, in matters in which confessedly they have little knowledge, they prefer to abide by respected custom and tradition. But there exists as yet no available evidence to show that, even in mental powers, as judged by ordinary standards, the superior students found in Latin owe their superiority to their Latin studies.

It is not here contended, of course, that other secondary-school studies, as now administered, give results superior to Latin. Practically, viewed from the standpoint of the needs of our age, our entire program of secondary education has been stricken with the blight of blind traditionalism and formalism. Mathematics, the one other subject apart from English that enjoys a monopolistic position like that held by Latin, supplies to most of the girls and to many of the boys obliged to study it, probably nothing more substantial than intellectual husks. French and German, as now taught, are, when judged by the standards of interest and mastery that should characterize a truly liberal education, largely cultural shams. High-school sciences, long ago placed under the bondage of a pedagogy derived from a now obsolete theory of mental faculties, have become bankrupt as means of giving

genuine appreciation and insight to the mind that must interpret well or ill the scientific social inheritance of the nineteenth century. Even history and English literature, largely because of faulty aims and methods, have so far failed to yield to our millions of youth the riches of humanistic vision and sentiment which ought certainly to be derived from these studies when pursued under right conditions.

4. SOME ESSENTIALS

What we now need is someone to speak to us with the voice of a trumpet the message which seems long ago to have been heard by young Athenians—that has everywhere been heard by generous youth destined to add to the spiritual possessions of their age—namely that as a strong people, our best opportunities to develop new strength, to do creative work, are here and now. We must learn to build for to-day and the future, and to turn to the past only when, in any given case, we shall have planted our feet firmly on the rock of the living present and the nascent to-morrow. Let us as a nation take due pride in the achievements of our forefathers and ourselves, and at the same time earnestly resolve yet further to enrich humanity by our efforts.

America's contributions already made to the social inheritance of the modern world are neither meager nor unimportant. Our democratic ideals of government and social life, our scientific mastery of economic forces, our steadily forming conceptions of community well-being—these constitute social assets fundamental to all other forms of social evolution and in all of these we have played our part as explorers, inventors and master builders.

It is now our opportunity and our obligation so to organize existing educational and other agencies of cul-

ture that here too the American people may be strong and creative. The feet of many of our gifted young men and women, given right incentive, can be turned into the paths of humanistic leadership just as certainly as were those of creative men and women in the virile and forward looking epochs of the past.

But to achieve these results we must develop in the fields of liberal education the conditions which have made the American people originators in the spheres of politics, mechanical invention, and business organization. We must cease to make ourselves dependent on the past, except as we perceive its possible service to present and future. We must encourage our youth during their plastic years to look about them and forward in the world of vital realities for objectives, and to look within themselves for incentives to action. They must learn to adapt with caution, and not at all flatly to imitate the work of those who lived under conditions very unlike those which prevail to-day. They must learn that we live in an age as unlike those of Athens or Rome or fifteenth century Florence, as are the topography and climate of the Mediterranean shores unlike the great geographic reaches and tremendous meteorological alternations of our continent.

The great war more than ever impressed upon us as a people that if we are to fulfill our destiny, we must cultivate originality. We must in every possible way seek out the inventive spirit among us and give to that endless varieties of encouragement and positive incentive. We must cease to be worshippers of the antique. Our Golden Age lies in the future and in prospecting our way towards it, we can, when we are sufficiently mature, and in exceptional instances, borrow even from the records of the journeyings of Xenophon or the quests of Ulysses. But we must borrow with restraint and discretion; other-

wise, our aspiring youth will become bemired in the accretions of ancient history.

The intellectual and spiritual assets wherewith the American people have entered the twentieth century have certainly never been equalled. Our economic control of nature has made us by far the wealthiest of nations in point of material resources, and these constitute the essential foundations, if we use them rightly, for the leisure, the appreciation and the education through which less tangible values are to be realized. Our one hundred million people constitute a population homogeneous and coöperative to an extent never yet equalled elsewhere.

But the faith of our people in education and their disposition to support it is the greatest of these assets. In 1915 over 1,500,000 of the adolescent youth of this American people were studying in our public and private secondary schools. Over 250,000 young men and women were in our colleges. These hundreds of thousands represented the best of aspiring America. They are, to the extent that their schools and their surroundings are capable of inspiring them, eager to serve their country and time. They have acquired a kind of frankness and vital interest in realities that we think of as American. They are not easily subjugated to the traditional just because it is traditional, but neither are they at heart irreverent towards ancient or great things when the ancient is really significant and things alleged to be great (for present or future) are such in reality. They do not reverence authority as such, for they see in submission to authority a means and not an end of the truly democratic life.

Utterly without foundation is the carelessly made charge that these young Americans are preoccupied with sordid ambitions for money or position. True, each boy or young man, and, equally, be it said to their credit, each

girl and young woman, now looks forward to the day when he shall be able to render through some suitable vocation valuable service to the society which has nourished him. As a means to fullest serviceableness in this vocation, he desires and actively embraces at the right time, genuine vocational education; and in some collective capacity America is now disposed to expand opportunities for vocational education as supplemental to the general or liberal education which our regular schools have heretofore offered. Much as we aspire to a due measure of leisure for all, we do not approve the ideal of a leisure class as such. We are too familiar with the close connections heretofore obtaining between leisure classes and a prevalent sensual æstheticism and moral degeneracy.

These clean-limbed, open-minded youth of ours—are we to believe that they have only inferior capacities for higher idealism, for the development of that new humanism for which the twentieth century calls? It is the proper function of education to help face these adolescents towards the future. This is no static civilization of ours. We are not seeking to remain eternally on the same level. We have learned the inevitableness of change, of evolution, and we have begun to feel, if not yet clearly to perceive, the possibilities of controlled evolution.

5. POSSIBLE PROGRAMS

What is the problem before the educational institutions of America? It is, let us repeat, to provide on behalf of our youth, the genuine means of a *liberal* education that shall be adapted to our age, our people, our circumstances. What would the best of the Athenians of the age of Pericles do were they in our place to-day? Would they try to find in forgotten tongues and antiquated fragments of literature the culture, the idealism, the men-

tal disciplines that will transform plastic youths into citizens strong to uphold the state, to advance up the slopes of intellectual inquiry and of appreciation of the possibilities of conscious coöperative direction of social forces towards the higher goals that the purposeful discovery of the future will reveal to us?

Let us first try to interpret what is undoubtedly in America to-day a very well-developed, even if only partially articulate, spirit of humanism—using that term in a legitimately modernized sense. It is not possible for us to locate the gods behind the summit of Mt. Olympus. To us they are abroad in our own land and among our own people, and the effects of their wills are everywhere manifest in our own day. In many of the most important matters of life our attitude and outlook are almost inconceivably different from those of the Greeks and Romans. Slavery and all other forcible subjugations of the body and spirit of man, not required for the general social well-being, have become things abhorrent. Moral degradation, poverty, and all the other sources and concomitants of low efficiency, of undemocratic competition, and of persisting unhappiness, are steadily being repudiated by the social conscience of our time. More keenly than ever do we perceive the needless horrors entailed by aggressive war, the disease-like character of crime and immorality, and the social wastage resulting from lack of knowledge and skill. A constantly increasing proportion of our people are steadily striving towards the day when within our borders may be found a vast and a thriving population, keenly appreciative of all the sources of light and fine sentiment that help to make life richer and purer. To the attainment of these conditions, we more than ever perceive the need of originality, of science, of the development of the best humanistic ideals and means.

We begin to understand our responsibilities for developing types of citizenship that Greece or Rome could not possibly conceive. It is our conviction that in a democracy, it belongs to all to assure to each the right to be socially efficient in all ways—culturally and morally, no less than physically and vocationally; and to enforce the performance by each of the duties which inevitably attend and complement rights. America sets the world high example in its persistent demands for increasingly wholesome family life, a better position for women, a fair start in life for all children. We are striving towards the time when in a purposeful way we may use all forms of fine art to the fullest extent that is possible in our day and generation as instruments of control, development, enrichment of life. We certainly see much farther into the things of society than did or could our Greek or Judean or Roman or Teutonic forebears. We have now the means of developing, as they could not, things of the mind and things of the spirit.

The new aims and methods will have to be developed in large part experimentally by educators who are well grounded in psychology and sociology. It is improbable that these experimenters will fail to make full use of the valuable materials to be found in existing customs. Like the Pasteurs, Edisons, and Lincolns, who, in other fields have wrought to new achievements, they will gladly take from past practice or surviving custom the light that will help them on their way. All they ask is that their efforts be not blocked by vested interests and protected faiths. There is no credit to a civilized society in allowing prejudice and blind conservatism to visit death on a Socrates, ignomy on a Columbus, and disheartening obstruction on a Pasteur. The experimental schools of to-morrow—and we must and shall have scores of them—ought to be given

the freest possible scope to develop and test new and varied objectives and the means of realizing them.

In a few essential respects, it is certainly even now practicable for the student of modern education to predict some probable developments in the new liberal education.

For the adolescent youth the processes of that education will involve reasonable amounts of the sharpest and sternest discipline—discipline of powers of body, of mind, and of moral character. But the youth himself will certainly be an appreciative and informed party as regards the ends of these disciplines. He will not usually need to be driven in fear, or be invited to proceed in blind faith, because the valid worth of that which he must do will be a matter of generally understood demonstration.

Like the Athenian youth whom we delight to recall, he will be trained, and trained hard if necessary, in those powers that have a visibly functional place in society as it is to-day or will be to-morrow. No longer will he be obliged, in the name of an obsolete pedagogy, to subject himself to disciplines which, like the nostrums of mediæval medicine, could rarely be taken by intelligent persons except in a spirit of uncertainty and misgiving.

We are indeed learning to be ashamed of that devotion to educational "simples" which in our secondary education deluded us into thinking that a year or two of work with algebra and geometry by adolescents who would later make no vocational use of the knowledge acquired, or four years of indifferent study of a classical language, with its resulting meager grasp of literary selection, read often with the furtive aid of ponies, can give for our day and generation the foundations of the powers which we idealize as intellectual discipline. We are learning the futilities of that misleading and mechan-

ical pedagogy based upon a metaphysical and unscientific psychology which thinks to find in Latin and algebra intellectual philosopher's stones—to find in these mummified studies, quite divorced from all the realities of mind, spirit and body as they belong to our day and generation, precious means of nurture for mind and spirit.

But the new liberal education will achieve only part of its results through the rigorous processes of hard discipline. It will provide also for many forms of growth through appeals to native interest, ambition, and instinctive good will. It will discover a pedagogy suited to the easy evoking and establishing of appreciations and ideals of approved worth. It is a widespread error of educators of the older type that schools rated good by current standards develop appreciation, tastes and ideals generally through the exercises of the classroom. This happens occasionally for the rare pupil under an average teacher and for many pupils under the exceptional teacher —that one teacher out of a thousand whose native genius can make even mathematics or Latin fascinating. But these finer qualities are much more often the by-products of the school life, the residual effects of play, social intercourse, and miscellaneous reading. The secondary school of the future will have a splendid opportunity to extend and render more effective these forms of education of which the disciplinarian and taskmaster knows little and often cares less. A new type of schoolmaster must arise who can comprehend the significance in true cultural education of self-inspired work, leisurely development of tastes and abiding interests, and the richness of inspired social intercourse.

Much light is now being shed on the problems of developing a functioning liberal education through the progress recently made in defining the ends and means of effective

vocational education. Heretofore, all education except the vocational education designed to prepare for a few professions, has been vaguely assumed to "fit for life"—in the vocational no less than in the cultural and civic sense. Faculties of liberal arts colleges have solemnly defended the thesis "a college education pays" when business men, moved only by considerations of vocational efficiency, have challenged them. That a college education might well "pay" on grounds wholly other than vocational—and pay both the individual in culture and the other abiding satisfactions of life, as well as society in the higher type of citizen produced—should be a highly defensible thesis. But endless confusion results when the objectives of vocational education and of liberal education are confused, or when it is assumed that the same means and methods will serve equally the ends of each. Vocational education in any properly delimited meaning of the words must have its processes, its means and methods strictly determined by the requirements of a known calling—and in the modern world these tend to proliferate and multiply along lines of specialization to an almost indefinite extent.

Fortunately, we now see that we cannot effectively "vocationalize" education by offering in a high school or college a few elective studies or courses of an academic nature, with a slight accompaniment of laboratory illustration or practice. We have been attempting this in numberless cases with agricultural, industrial and commercial education—and even with home economics, journalism, business administration, teaching and social work. Only recently are we coming to perceive the great wastefulness and futility of it all. We are certainly destined soon to have a system of vocational schools, the vestibuled approaches to the thousands of vocations now found in

civilized society, but these schools will be as definitely differentiated from schools of general education as are now colleges of law, medicine, dentistry and military leadership. We may expect then that the functions properly belonging to schools not vocational in purpose will be revealed more clearly. With this knowledge, we can proceed to devise the most effective general or liberalizing education for those thousands who must or will close their general school in their fourteenth or fifteenth year; for those other thousands, more fortunately situated, who can give from one to four precious years to the liberal education offered by the secondary school before embarking on the study or practice of a specific vocation; and also for that minority who usually combine much native ability with fortunate home conditions, who aspire to a "college degree" before taking up the study of a profession. Here lie our opportunities to differentiate the ends and to determine the means of genuine liberal education.

Among its larger objectives this liberal education must develop and conserve for present and future generations in those who are to lead, attitudes of intelligent hopefulness, and faiths in human improvement and all that we call progress. Towards other people and towards peoples of different qualities in our midst, it must stand for increase in sympathetic understanding and mutual helpfulness. As regards the great social inheritance of knowledge, customs, and institutions which we have acquired from the past, its spirit should be appreciative and discriminating, based on the conviction that some things, and some things only, of that inheritance have a vital, a functional significance for the present and the future.

Among the more specific results of a better liberal education, we trust that the men and women in the future will exhibit a finer and stronger command of our won-

derful mother tongue than is now the case. A good command of the vernacular is indeed among the vague ideals of our schools of liberal education now, but the means to their realization of this are seriously ineffective. We have every right to expect the discovery of educational means whereby education towards desirable mastery of English can steadily be improved. There exist beliefs—shall I say superstitious beliefs (certainly they rest on no adequate evidence)—that study of one or more alien tongues is a highly desirable, if not necessary, condition of sound attainments in the vernacular. But with English steadily evolving towards becoming a world language, we can have confidence that a fine command of it is possible under right methods of training, even to those who have secured no power over another language.

It will readily be understood that well-developed insights into, and appreciations of, English literature must also count as an indispensable element in the liberal education of all our young men and women. But this is not to be interpreted as including only study of those portions of English literature which are held to be classics. Too often the older vernacular literature, like the ancient literatures in other languages, possesses no functional value in inspiring youth to seek to interpret and to share in the control of the social and cultural forces of the twentieth century. We must include appreciations, understandings and evaluations of all that literature which is each year in process of being made—and which, in a collective way, often voices the aspirations and the forming social attitudes of the peoples and times in which we live. Of course, at present we know little of the best means and methods for the direction to such study; but they are certainly discoverable.

Next in importance to the English language and Eng-

lish literature as means of liberal education, we should place the social sciences, as these can be adapted to lay secure foundations of insight and ideals for good citizenship and fine human aspiration. But here again we must discard the traditions that have heretofore bound us to the ancient and the remote. History, that great encyclopædic massing of data for the social sciences, must be made a subject of reference, not something to be studied for its own sake in chronological order by those youths who are laying the foundations for genuine humanistic culture. Students must first acquire concrete experience and definite knowledge through vital contact with the significant realities of the living present; then, as occasion offers, and needs of interpretation and perspective arise, they will be turned towards those things in history that demonstrably do function in better appreciation or understanding of the things of to-day, to-morrow and next century. The range and variety of problems to be solved by the citizen of a progressive democracy in the twentieth century are great indeed; and that can be no true culture, no true humanistic learning, which does not with sureness of aim and precision of method inspire and train the adolescent for their solution.

Few will dispute the claim that in a modern scheme of liberal education a large place should also be given to natural science. The science subjects now found in our secondary schools and, to a large extent, in our liberal arts colleges, have rarely contributed in any genuine way to culture. They have suffered somewhat from the opposition of the former defenders of the classics, but still more from their misguided friends who would, on the one hand, make them Cinderellas in the interest of vocational competency or else sharp drillmasters of "scientific method" and the mental discipline supposed to be

derived from an intellectual "cure-all." Wholly new objectives and wholly new methods are needed in natural science teaching. Some successful experiments pointing ways to these are to be found even now. No one awake to the larger possibilities of liberal education need doubt that the natural sciences—those sources of insight and aspiration that have largely made the twentieth century, for good or for ill, what it is—can yet be made vital means of liberal education.

There remain the fine arts of music, painting, and sculpture. Our schemes of so-called liberal education give little or no place to these to-day. But should not purposive development of taste and insight here be given prominence in any generous project for liberal education? Certainly discriminating and catholic appreciation of these fine arts constitute a large element in culture as best understood and defined. No less, certainly, when once the valid objectives of a functioning liberal education shall have been determined, we shall find appreciative studies of the fine arts given high rank among the means to that end.

What do we desire with reference to the classics in our schools and colleges? Only this: that they shall be accorded no special favors, given no artificially protected position. We wish the field of higher education to be made as open as possible to the end that in its every effort to devise, invent, and create the means of a liberal education adapted to the needs of our time and opportunities, we shall not be hampered by the dead hands of useless tradition, the old inertias and controls of an age that saw in a static civilization the highest of all earthly glories.

Do we wish to prevent the study of the Latin, and especially of the Greek, language and literatures? Assuredly not! For those with genuine interests in such

studies, every facility should be afforded in schools and colleges that can obtain enough students to justify the expense. And we hope that, given fewer students and the genuinely interested, such studies might become, for a few at any rate, genuine well-springs of interest, appreciation, and insight—something which is far from being the case at present.

We earnestly desire that the great languages and literatures of Greece and of Rome, and of every other age that has enriched the world, shall be the objects from time to time of careful inquiry and developed appreciation by persons mature enough to serve as interpreters of these treasures to each succeeding generation. We believe that from age to age in the light of our own added knowledge and developed experience, these languages and literatures will still continue to make their contributions, as will, in somewhat similar measure, ancient Irish lore, the sagas of the European northwest, the philosophy of India, the religious writings of Confucius, and even the mythology of our own North American Indians. To none of these sources of inspiration can a country like ours in its future evolution be completely indifferent. From time to time, we shall expect aspiring spirits to visit these faraway lands and to bring back some treasures fit for the adornment of our temples. For these purposes, however, we shall require no compulsory study of these ancient languages in our secondary schools or our colleges. Much more profitable will it be for us that individuals themselves take the initiative from time to time in making the necessary explorations.

In fact, a large part of the liberal education offered, even in the secondary school, will consist in the deep plumbing of a few intellectual or æsthetic fields in which the candidate has native interest and power. Under a

yet to be developed system of educational guidance, each learner will be induced, as part of this liberal education, to select some one field of culture and to make of that a life interest. Among these might well be: Greek language and literature; seventeenth-century English literature; modern Japanese language, history, and literature; violin music; architecture; "natural history" of a given region; some branch of social science; eugenics.

The foreign languages, ancient and modern, and mathematics—what place will finally be reserved for these subjects which, despite frequent allegation to the contrary, now compose the heavier part of practically all programs of secondary education designed as preparation for college, solely because of their supposed value as apparatus for mental gymnastics? It is perhaps too early to say with confidence. Algebra and geometry will unquestionably hold a strong position in the prevocational training of those who have reasonable expectations of entering vocations using mathematics as an important instrument. A few other persons may be expected to elect them through sheer native interest in the special intellectual activity and the particular insight which study affords. We shall hope and expect, too, that in addition to those who study for probable vocational use, a modern language, others may be induced to give the toil and enthusiasm required to beget that mastery of French, or Japanese, or Russian, or Spanish, which shall enable the fortunate possessors thereof, like generous amateur musicians, to be sources of appreciation and insight in circles where they move, as well as translators—in the larger sense of the term—of the good will and intellectual riches of the peoples whose culture has become accessible to them through the mastered language. In somewhat similar process may we also expect, as elsewhere suggested, fine

spirits to prepare themselves, from time to time, to journey intellectually in quest of treasure still to be found behind the linguistic walls of Greek, Latin, Sanscrit, Erse, and Inca writings.

To make these things possible in education, much will yet be needed of courage, faith, inventiveness, and labor. But these are even now extensively enlisted in support of many progressive movements and experimental developments. One immediate step that will help much is an educational declaration of independence which will release the grip of one of the few surviving relics of old-world tradition—a declaration of independence from the grip of the Dead Hand of Latin.

CHAPTER VI

THE OBJECTIVES OF MATHEMATICS

As we turn to the social sciences in the search for scientific foundations of educational objectives, we find ourselves at times obliged to evaluate in terms of their social worth studies that have long had not only a respected place in school curriculums, but which have also taken on relatively fixed forms of organization. Of all of these studies mathematics is certainly the most typical. Mathematical disciplines and technics obviously play a much larger part in modern life than do the classic languages; and, unlike these, they function no less in various forms of vocational competency than in liberal culture. But certain divisions of arithmetic, as well as algebra and plane geometry, have quite certainly become educational fetiches in recent years. Nowhere can we find better opportunities to begin our sociological inquiries into the relative values of historic school subjects.

I. INTRODUCTORY

The number of school hours actually available for the instruction and training of fortunately placed children rarely exceeds 10,000 between the ages of six and eighteen. Of these probably not less than 1200 to 1500 are devoted to the study of the mathematical subjects. In the case of less fortunately circumstanced children frequently as much as 20 to 25 per cent. of their time available for schooling is devoted to these studies.

But mathematical studies are also the hardest for many pupils. From these they exact a large amount of

intellectual toil, even drudgery. Pupils of inferior native abilities, and probably also some of superior particular abilities (*e.g.*, along the lines of music, and literature), are often greatly discouraged through their failures in mathematics.

Obviously a society that in effect requires its young people to give so much of their educational time and strenuously expended energy to such a group of studies should have excellent reasons clearly formulated for the exactions it makes. But such is certainly not the case now with the mathematical studies.

Custom, rather than scientific analysis of social needs, seems still to play a major part in determining what amounts and kinds of arithmetic shall be required of all, as well as in giving to algebra and geometry their present highly protected positions. It is encouraging to find, however, that within the last few years, a few noted teachers of mathematics have addressed themselves to investigations of the actual educational values to be derived, by given classes of learners, from stated types of mathematical study.

For some years two distinct tendencies have been observable in the theory, if not the practices, of teaching mathematics in schools and colleges: (*a*) towards the simplification or omission of mathematical studies required of all pupils; and (*b*) towards increasing the variety of elective offerings. It is the writer's conviction that we are as yet only in the initial stages of these two movements. The most immediate practical questions before educators as regards mathematics teaching are, therefore: (*a*) what are the "minimum essentials" that shall be required of all in given schools or grades; and (*b*) what shall be the variety and character of the electives to be offered in given schools or grades?

In the curricula for grades seven to twelve as now usually found in our public schools, the mathematical studies are probably more definitely organized and rigidly administered than any other corresponding group. Comprehensive and "hard" (even if somewhat "mushy") courses in arithmetic are almost universally prescribed in the seventh and eighth grades. Until very recently algebra and plane geometry have been prescribed universally in high schools, and for admission to higher institutions—while the flexibility yet permitted is very slight.

The readjustments now taking place or soon due in secondary education will necessarily involve as full an examination as practicable of the purposes now served, or capable of being served, by all studies, including the mathematical studies. The methods of this examination should be, as far as the existing state of knowledge permits, psychological and sociological.

Psychological studies are needed to show how far and in what directions the specific capacities and powers resulting from stated kinds and degrees of learning in mathematical fields affect capacities and powers in different or in more general fields. They are needed to show how far certain types of general or composite courses (general applied mathematics, industrial arts, etc.) give the species of appreciation insight and ideal that we recognize as educational or vocational guidance—abilities to choose well among prospective lines of study or other activity. Especially are they needed to enable us to determine to what extent and under what conditions mathematical skill and knowledge of a relatively general nature, can be, and actually is, brought later into application to realistic and particular situations.

But studies essentially sociological are even more needed. For what distinguishable social classes or groups

can or do specifiable types and degrees of mathematical learning possess values—values as contributions to personal culture, or as contributions to vocational proficiency? Through sociological studies it is now practicable in a measure to differentiate and delimit many types of social classes or groups and to ascertain—although by measures necessarily crude as yet—the educational needs and productive potencies of each. It is at least partially within the powers of psychologists to determine what are reasonable amounts of learning of specified kinds that can be accomplished, *e.g.*, between the ages of six and eighteen by persons of approximately known grades of ability. Equally it should soon be possible for the student of educational aims or objectives, making use particularly of sociological studies of needed powers and capacities among different groups of adults now composing society, or of those who will compose it from one to three decades hence, to arrive at some fairly useful judgments relative to courses to be prescribed or recommended in the schools of to-day.

(The " classes " or " groups " referred to here are not, of course, those created by artificial social distinctions, but those due to natural abilities, vocational necessities, etc. It is assumed that men and women, rich and poor, black and white, have the same legitimate educational needs in so far as they have the same abilities, opportunities for similar standards of living, and openings for vocational achievement. But it is also assumed that a provident society will not try to give the same kind or degree—it may try to make the same investment of effort —of mathematical education to those gifted with excellent mental powers as to the poorly endowed; to those who will probably follow the clothing-making vocations or law, as to electrical engineers; to those who will probably have

a $900 a year standard of living as to those who will probably have a $5000 a year standard.)

It is obvious, of course, that the largest problem confronting the educational sociologist prosecuting these studies for the purpose of determining optimum programs of education, is that of *relative* educational values. Time is short and art—art of educating no less than others—is long. The world of possible learning—even for our young people—is, like the menu of a pre-war hotel, a multiplicity of good things. Wisdom dictates that we spend our limited time, energy and ability on the best. What are they? Best for whom? Best under what circumstances of native power, interest, probable future need? These are questions for educators and administrators to answer—but to an increasing extent they will have to be answered on the basis of sociological knowledge, rather than on the basis of the faiths of idealists and partisans, the beliefs and customary practices that have formed and crystallized, one hardly knows how, in the social inheritance.

For some years the writer has orally and in writing criticized adversely certain beliefs and traditional practices relative to mathematics in secondary education, especially the following:

1. The belief that algebra and geometry, as customarily taught, are functional to an important extent in a large variety of vocations or higher studies likely to be followed by students.

2. The belief, formerly widely held, that algebra and geometry are peculiarly valuable studies as means of general mental discipline, and that therefore their prescription in high schools or for admission to college could be justified on this ground primarily, when it could be shown

that for certain classes of students it was doubtful if they could be shown to possess other primary values.

3. The belief that algebra and geometry, as usually taught, added substantially to the cultural possessions of learners taking them, irrespective of keenness of interest or of ability displayed.

4. The practice of requiring the study of algebra and geometry in all, or nearly all, high-school courses, at least as a condition of graduation, without intelligent regard, for example, to the probable needs and interests of girls, of girls and boys who would probably remain in school but one or two years, or of pupils intending early to enter commercial vocations, etc.

5. The practice on the part of all but a negligible number of colleges of absolutely prescribing algebra and geometry for admission, irrespective of courses to be followed.

The writer has always felt very doubtful about the results of the arithmetic teaching in grades seven and eight; but the problem of educational aims has here been so complicated with problems of administration (*e.g.*, the usual requirement that teachers of these grades must teach *all* subjects) and of inherently faulty methods which were, nevertheless, capable of reform, that it has seemed less urgent to open up questions as to the wisdom of prescribing arithmetic in these grades.

Now, however, that these upper grades are, in progressive school systems, being transformed into junior high schools, thereby giving opportunities for flexible curricula and adaptation of courses to the needs of varying groups, problems of prescribed and elective mathematics become as urgent here as in the high school itself.

But the writer has never urged the omission of the usual mathematical studies from schools large enough to

provide classes of working size of those electing them. He has always insisted that he would not prevent, nor, in the light of our present ignorance, and the no less doubtful values of possible alternative studies, even discourage, girls desirous of taking mathematics from doing so.

It is the purpose of this chapter to analyze in the light of present thought some of the problems involved as to the place of mathematics studies in secondary schools, and to set forth, as a basis for further inquiry and discussion, certain hypotheses and proposals, especially as regards educational aims. To avoid the confusion inherent in the use of the many vernacular words necessarily adopted for technical uses in this field some definitions and concrete exemplifications of words and phrases used with more or less particular meanings are included.

2. GENERAL PROPOSITIONS

These *general* propositions are submitted for discussion:

1. The most fundamental sociological consideration affecting the prescription and offering of mathematical studies in public schools is that involved in man's dual position as producer and as consumer. Every normal adult is a *producer* of goods—wheat, *or* cloth, *or* transportation, *or* healing service, *or* machines, *or* teaching. And the constant trend, originating far back of the beginnings of civilization, is always towards greater specialization of productive work, until in the United States to-day, men, women, and juveniles follow more than 2000 distinct vocations. But every person, adult or other, is likewise a consumer or utilizer of goods—wheat *and* cloth *and* transportation *and* healing service *and* machines *and*

teaching. (Utilization—of capital goods—primarily for further production is here placed under production.) But the constant trend in general utilization is towards universality of consumption—especially in democracies composed of individuals all having aspirations towards higher standards of living.

One set of aims in mathematics instruction, therefore, is established by requirements of good utilization—that is, good buying, good reading, good investing, good comprehension of environment. Another set of aims is established by requirements of particular vocations—those respectively of bookkeeper, machinist, architect, artillery officer, housewife, printer, etc.

2. Within the limits that can readily be established by sociological research the desirable *minimum* universal standards (or, for classes of persons of known grades of ability and available resources—time, leisure, etc.—towards acquiring education, even desirable *optimum* standards) of mathematical powers (of execution, performance) and capacities (for appreciation) essential to good utilization can be ascertained and defined.

3. It should likewise be readily possible, through sociological research, to ascertain and define the requirements of mathematical powers (as to kind and degree) essential to the effective pursuit of any known vocation, and also to ascertain the approximate number of persons who should seek, be encouraged or be prepared, to follow that vocation at any given time.

4. Some mathematical powers and capacities—perhaps to add, to appreciate the significance of easy graphs, to compute simple interest, to appreciate that the distance of inaccessible points can be measured by mathematical means—will be found to be functional or even necessary, in both utilization and in many forms of production.

Where such is the demonstrated case, the aim of utilization can be assumed to be the more controlling in framing programs of instruction and training.

5. In planning for school curricula it is essential that we assume optimum working conditions—as to size, staffing and equipment of schools, vocational hetereogeneousness of groups of adults, varieties of abilities and interest found, etc. When guiding principles for curricula shall have been determined for these optimum conditions, then adaptations can be made along most profitable lines for other conditions. For example, in a junior high school of 1200 pupils several different courses in mathematics could economically be offered if the varied interests of the pupils seemed to make it advisable. But in a junior high school of only fifty pupils probably but one course could be offered.

3. JUNIOR HIGH-SCHOOL MATHEMATICS

The following propositions relative to desirable aims of mathematics teaching in junior high schools are submitted:

1. Between the ages of eight and twelve (particularly in grades four to six inclusive—it is doubtful whether, in states where school attendance is assured to fourteen years of age, anything is gained by teaching arithmetic in the first two grades) the essential mathematics of utilization required by prevalent American standards of living should be required by all, and can be met by nearly all. This mathematics should include much of what is now given in these grades, reorganized as to methods so as to be as concrete and interpretative of environing life as practicable. But the controlling aims should be more consciously focused on the needs of adult utilization than

is now the case—of buying, change making, simple accounting, newspaper reading, thrift, etc.

No mathematics can profitably be required or offered in the first six grades primarily towards ends of production or vocation.

2. On the assumption that full-time school attendance is obligatory up to fourteen years of age; (*a*) mathematics of utilization, made very direct and practical, should be required of those who (aged twelve to fourteen) have not yet met sixth-grade standards; (*b*) short, intensive courses—*e.g.*, thirty hours in each half year—of mathematics of utilization, partly progressive from work done in first six grades, partly in very specific fields of more advanced utilization appropriate to the greater maturity of pupils, could well be required of all normal children in seventh and eighth grades. But topics or cases must clearly center in demonstrated *general* needs of later utilization, *e.g.*, interpreting simple statistics as presented by news, and civic information, pages, keeping simple accounts, making correct change, interpreting railway time tables, computing wages, ascertaining right distribution of income, etc.

3. Special short courses—in large junior high schools, several are possible—in advanced forms of the mathematics of utilization are ideally desirable as electives in the seventh and eighth grades. One or two of these might be A class courses, and one or two B class courses. Possible specific objectives for these courses, and possible methods for the B class courses, remain yet to be worked out through research and experiment. We now lack even acceptable terms and norms wherewith adequately to discuss them.

4. Where a considerable number of the pupils will probably follow a particular vocation, it would be expe-

nearly as mystical (perhaps mythical) as "shop mathematics" (the same query is, of course, "what kind of shop—shoe shop, tailor shop, diamond cutters' shop, watch repair shop?") or "commercial arithmetic."

Can other courses in genuinely prevocational "mathematics" be offered profitably in the junior high school? Of course, if we frame our courses as suits of clothes were once made for asylum inmates, yes—because the wearer is expected to fit the suit, not the suit the wearer. But if we apply true tests, namely, that the major portion of what

is taught shall function in the vocation expected to be followed; and that the major portion of those taught will be found eventually in the vocation towards which the prevocational study was taken—then it is doubtful whether in the usual community, prevocational courses in fields other than those above named can profitably be offered. But the problem of discovering the facts ought not to be difficult, once the conditions of the problem are determined and documented, and we resolve to use accurate language instead of such "fuzzy" terms as "shop mathematics," "commercial mathematics," etc.

5. In large junior high schools there may well be offered, also, various special courses open to election, usually of the A class type, and centering in distinctive areas of mathematics, especially as applied in practical life. Under each of the partly descriptive titles below it is clearly practicable to group a large number of problems, topics, exercises, even projects, sufficient to constitute a "hard" or A class course of from 30 to 180 hours; and all adapted to the ages and ascertained abilities of the students likely to take them: (*a*) industrial mathematics—materials from twenty common trades and thirty factory occupations; (*b*) commercial mathematics —materials from fifteen generally known commercial callings; (*c*) introductory algebra; (*d*) inventional or intuitional geometry; (*e*) geographical (and navigational) mathematics; (*f*) statistical mathematics (including interpretations through graphs), etc.

But since in most cases there can be no guarantee that, for given pupils, the results of the work here suggested can function vocationally, the deceptive practice of calling such courses, directly or by implication, "prevocational" should be abandoned. Pupils should be encouraged to elect such courses as appeal strongly to

their learning powers and interests; and coercion should be reserved only for defectives and recalcitrants.

Possibly, for some pupils, work done in some of these courses may result in further insight as to future possibilities—the functions of educational or vocational guidance. But the practicability of using these or any other ordinary school courses for this purpose is still so shrouded in mystical assumption and tender-minded speculation that little attention should as yet be paid to this as a primary aim.

4. SENIOR HIGH-SCHOOL MATHEMATICS

The following propositions are offered as expressing one point of view with regard to mathematics in the four-year high school—by which is meant a non-vocational secondary school primarily for pupils fourteen to eighteen years of age.

1. In view of the diversity and number of possible specific objectives, all of substantial worth, in high school liberal or general education and the varying characteristics of the pupils attending, there can be no justification for prescribing any one mathematical study, or even a stated minimum of mathematical study, for all.

2. When sufficient numbers of pupils are known to be likely to pursue subsequent studies (in liberal arts college, vocational college or vocational school), or to enter a vocation towards preparation for which pupils of high-school powers can profitably take prevocational courses, then these courses should be offered and recommended as electives.

Prevocational courses in mathematics should normally be offered only when: (*a*) a relatively large amount of mathematical skill and knowledge are required to begin study of, or initial practice of, the expected vocation; (*b*)

a substantial part of the needed mathematics can readily be acquired some time in advance of the students' preparedness to enter the vocational school or vocation in view; and (*c*) it is probable that a large majority of the students electing the courses will go forward to the vocation. Failing these conditions, a high school should not expend valuable time and money on prevocational courses.

Among the possibilities to be considered here are: (*a*) Pre-engineering algebra, geometry, and trigonometry; (*b*) pre-banking, or pre-accounting, statistical, and commercial mathematics; (*c*) pre-farming mathematics to meet known local requirements; (*d*) pre-homemaking mathematics; (*e*) pre-navigational mathematics; (*f*) pre-machine-shop mathematics; (*g*) and others.

Do needs exist for pre-medical, pre-printing, pre-commission house, pre-legal, pre-theological, pre-elementary-school teaching, pre-tailoring, pre-dry-goods salesmanship, pre-language teaching, pre-infantry lieutenancy, mathematics? We assume that in each of these cases, needed mathematics will also be offered in the respective vocational schools training for these vocations.

3. One or more avowedly non-vocational or non-prevocational courses in mathematics (of an A class type) might well be offered as electives, and, of course, must be so offered as long as college entrance requirements remain on the present unscientific basis, where long and often arduous preparation in algebra and geometry is insisted upon, for traditional reasons in the main. Such requirement probably has a "hurdle" or selective value—as a means of sifting out students of promising ability—but proper tests could probably be devised which could accomplish the same results in a week (five hours) of the students' time rather than in two and one-half years (450 hours) as is now the case.

4. As means of truly cultural education, courses to produce appreciations of the parts played by mathematics in civilization—in revealing the heavens; making possible bridges, tunnels, and lofty buildings; sailing the seas; harnessing electrical energy; preserving land boundaries; determining evolutionary changes in organisms, etc.—should be developed. But pedagogical difficulties to be overcome here are great and are doubtless factitiously increased because present mathematics teachers themselves fail to see in appreciation a very different type of objective from the objective of *power of execution*—although all are familiar with the purposes of producing appreciation of paintings on the part of those who cannot paint, appreciation of music on the part of those who can neither sing nor play, appreciation of cooking on the part of those who cannot cook.

5. VOCATIONAL-SCHOOL MATHEMATICS

The following propositions are submitted with regard to mathematics in vocational schools:

1. Every distinctive type of vocational school will, of course, provide for the teaching of needed special mathematics concurrently with the teaching of the other skills, knowledge, and ideals requisite for initiation into, and progress in, the vocation. Where some of these needs can economically be met through prevocational courses in other schools the provision of these in earlier schools will be encouraged.

2. Most of the prevailing assumptions regarding the amount and character of the mathematical skill and knowledge required for the successful prosecution of vocations (over the years of the usual working time) are probably wrong. They are chiefly the products of uncriti-

cal thinking (and aspiration, often mistaken for thought) of persons of strong mathematical interest, partisan specialists, whose formula is "He ought to know," but who rarely offer reasons, based on consideration of relative value of many subjects, why "he ought to know."

3. Profitable studies could and should even now be made of topics like these:

(*a*) What vocational mathematical knowledge and skill are now used by men and women successful in slightly more than average degree (the B class among workers rated as A, B, C, D—or excellent, fair, good, poor) in the following vocations: custom tailors, women stenographers, dentists, coast service sea captains, orange growers, electrical engineers, artillery officers, unspecialized village house carpenters, kindergarten teachers, teachers of French in high schools and colleges, retail grocers, automobile repair mechanics, soil analysts, job printers, poultry growers, produce commission merchants, vampers in shoe factory, jewelry (and watch) repair men and retailers, homemakers on budgets of $900 to $1200 per year, homemakers on budgets of $3000 to $5000 per year, street-car motormen, piano tuners, locomotive engineers, pattern makers, telephone-line repair men, traveling salesmen for tobaccos, cigarette makers (girls fifteen to twenty-two years of age), seamstresses, waitresses, meteorologists, and over 2000 other vocations followed by the 40,000,000 wage-workers and 20,000,000 homemakers in the United States.

(*b*) What additional or different mathematical knowledge and skill than that which they now possess would be advantageous to workers in above callings, and to what extent can these be supplied, to their successors, either apart from, or in, special vocational schools?

(*c*) What are the requirements of mathematical skill and knowledge *common* to groups of the above callings, and do we now produce these in non-vocational schools, or can we do so economically?

6. RELATED PROBLEMS

Any adequate discussion of the desirable and practicable aims of mathematics teaching necessitates examination of certain related problems which can be only briefly referred to here: (1) What may normally be expected of children in the way of mathematical powers and capacities at the end of the sixth grade? (2) Can and should one or more courses in mathematics be employed towards the ends of educational or vocational guidance? (3) What are the probable extent and character of the mathematics required in teaching thrift, investments, etc., in general (consumers' civic) education? (4) Is it important that algebra or other mathematical subjects be taught as a means of giving general acquaintance with the significance and uses of formulæ? (5) If mathematical studies be placed largely on an elective basis in the junior high school and wholly so in the senior high school, what will be the desirable alternatives for pupils electing no mathematics?

1. The expected equipment of children at the end of the sixth grade, at least as regards knowledge and skills, is now largely standardized (exceptions are found in schools experimenting with innovations—which are chiefly innovations of method rather than aim). These standards can be ascertained from text-books, courses of study, inspectors examinations.

Obviously this expected equipment can be evaluated in individual or social terms, once criteria are agreed upon

and formulated in comprehensible terms. For example, if consumers needs were deemed paramount, tests could be developed, and applied to determine what these are and how much time is normally required to meet them.

Undoubtedly much of the arithmetic which we now teach, or try to teach, in the first six grades is useless or else our efforts futile; but we need new standards to determine what is wrong and what is right in our present procedure.

2. Contemporary demands for vocational and, even more broadly, educational guidance foreshadow important new developments in the study of educational aims and the adaptation of educational means and methods to the achievement of predetermined ends on behalf of groups of children of known characteristics and needs. Wherever alternative courses of action, including choices of schools, or choices of curricula, courses or topics within schools, are possible in the future to children, we can reasonably expect that scientific skill and knowledge will be increasingly at the disposal of the child, his parents, his teachers, and even his probable future employers and the state itself in determining which alternative, all factors considered, it is best for him to take.

But it is obviously desirable that the processes of diagnosis, recommendation and prescription under these conditions should be expeditious and economical. It is, for example, now proposed by some that a year's composite course in mathematics should be prescribed in the ninth grade in order to insure each high-school entrant opportunity to "find himself" mathematically—and this after the pupil is expected to have given eight years already in part to the study of arithmetic! But is not this too much time to require for the purposes of guidance? In fact,

more fundamentally, is any school subject, as now taught, or as capable of being taught, at all well adapted to the ends of guidance? Must not the approaches eventually be on a wholly new basis? "Cut and try," "the expensive school of experience," "trial and error," "blind empiricism"—these are all heritages of prescientific stages in social evolution. When the military service can put into practice somewhat reasonably economical and effective "selective service," educators will surely not be found lagging.

The writer does not undertake here to suggest effective means of guidance; but he recommends that all attempts to preserve old prescriptions in new guise—manual training, general science, composite mathematics—in the alleged interests of valid ends of guidance, self-discovery, etc., be scrutinized very carefully.

3. "Thrift" and the making of investments is one desirable aim in education for utilization. In a well-ordered and progressive society we expect a constantly increasing proportion of adults to *save* and *invest* as capital a portion of the wealth they produce. Hence the teaching of important knowledge and ideals relative to "thrift," and of such concrete topics as stocks and bonds, banking, life and other insurance, etc., become legitimate objectives of good social education. But do these topics belong primarily under the subject "mathematics" or that of "civics"? They have their mathematical aspects, it is true, but from the standpoint of the non-vocational needs of the "utilizer" these mathematical aspects are small and of relatively little importance. Nowhere has the intrusion of specialized vocational aims done more to make the path of general, *i.e.*, consumers', education arduous and unprofitable than in these phases of arithmetic.

Indeed, the very insistence on the mathematics of stocks and bonds, insurance, banking, etc., now found in our text-books on arithmetic actually serves to defeat the attainment of the civic ends that should control in this department of education.

(*a*) An analogy is found in geography. This subject, as developed for non-vocational ends, has its mathematical aspects; but to treat the subject as part of mathematics for this reason would be most inadvisable. A distinctive subject should be put under mathematics only when half or more of the effort to be put on it is clearly to be directed towards the acquisition of mathematical powers and appreciations—skills, knowledge, ideals, etc.

4. Mathematics makes extensive use of those abbreviations—of single words and multiple-word descriptions or "formulæ"—which are extensively used to simplify or to render exact, written and oral communication. It is sometimes urged that algebra should be taught partly to give fundamental acquaintance with the use of formulæ to describe or designate complex processes. But the employment of algebra as a means to this end is open to the objection now generally held in all good pedagogy against teaching forms, apart from the substance they represent, the abstract before the concrete.

The word "formula" is often used in the sense of "rule" or standardized process—according to which meaning all school subjects may be said to have their special formulæ. Or the word may also mean, as in mathematics, chemistry, mechanics, biology, etc., abbreviated statements of rules, tested procedures, etc., through symbols, abbreviations of words, etc. Very young children are taught that inbreathed air has much oxygen and little carbonic-acid gas, while outbreathed air has much carbonic-acid gas and less oxygen; that three times six are

eighteen; that 12 M means noon; that "e.g." stands for "for example"; that where "and" is omitted between nouns in a series a comma is inserted. Older pupils are taught that oxygen and hydrogen can be united in definite preparations so as to give water, the process being symbolized in one way, the product in a slightly different way; that the circumference of a circle always bears the same ratio to the diameter, such ratio being symbolized by a certain character; that the total distance passed over by a body falling freely to the earth in a given time, etc., etc.

But obviously the important things in all these cases are the concrete realities, facts, ideas, involved. Surely it is wasteful if not futile to spend much time upon the shorthand before it is known what is to be expressed. Undoubtedly we should teach arithmetic in the lower grades so as to produce greater freedom in using appropriate formulæ. Quite possibly we should lead our children to be familiar earlier than is now the case with meteorological, accounting, hygienic, geographic, and musical formulæ. But these are problems of special subjects other than mathematics.

5. It is sometimes contended that if mathematical subjects were made elective in junior and senior high schools, no other sufficient subjects or other materials of study as alternatives could be found. Doubters on this point are asked to remember that no pupil can now take more than a part of the offerings of a standard high school, and that for many years we have suffered from congested curricula in the upper grades of elementary schools. The least of the difficulties of educators in urban high schools and junior high schools (rural schools, of course, for other reasons constitute problems by themselves) will be to supply studies alternative to mathematical studies.

7. SUMMARY

(The following summary of conclusions stated, as was explained, "dogmatically," was submitted to one of the ablest teachers of, and writers on, mathematics in the country. His comments are given in parenthesis.)

1. There exists a distinct body of mathematical knowledge which is very useful, even necessary, for men as consumers. This knowledge is capable of being organized as a special subject which would be very different from any organization of mathematics now found. Is this probably true? Is it probably significant, if true?

("It is probably not true that the organization of mathematics which you mention would be 'very different from any organization of mathematics now found.' It would probably have a good deal of similarity to such work as is done in certain classes in the Horace Mann School for Girls, in the Lincoln School, in the Ethical Culture Schools (all in New York City), and in many other schools.")

2. The minimum essentials of consumers' arithmetic can be taught in the first six grades plus a thirty-hour course in grade seven and another in grade eight. Is this probably so? How can this assertion be disproved?

("Your assertion is probably true. If you would change 'thirty' to 'ninety,' it is proved in European schools generally. The plan is not new, but I presume you reduce the hours more than present conditions justify.")

3. Advanced "unit courses" in consumers' arithmetic could well be offered as electives in grades seven and eight, possibly in still higher grades. Is there any objection?

("The only objection is the danger of making your courses so short and intensive that pupils will not have

time to digest them. No one really knows anything about this at present, least of all the man who thinks he does—a statement that is not intended to refer to you or to me or to anyone else in particular. I would like to know about the matter, but I think it will take perhaps fifty years to complete the experiment. I hope it will be tried.")

4. (*a*) There are almost as many types of vocational mathematics as there are vocations.

(*b*) Beyond the essentials taught in consumers' mathematics, vocations require much less mathematics *in common* than is ordinarily assumed. Is (*a*) substantially true? Can it be disproved by reference to the facts of vocations as now organized? Is not (*b*) probably true?

("In this question (*a*) is a matter of definition. When you get into the technical field of navigation or engineering, for example, the mathematics certainly becomes specialized. When, however, we consider the bases of mathematics needed in all vocations, these are not specialized. These bases you would call prevocational. As to (*b*), I do not think your statement is true. A large number of vocations use formulas, slide rules, logarithms, trigonometry, the equation, and the like, and it is economical to teach these to groups of students going into various vocations, and also for purposes of general information to those not going into vocations at all, taking the word in the usual limited sense.")

5. Occasionally the mathematics required for a vocation can most profitably be taught in a school devoted chiefly to general education and attended before the vocational school. Can this be disproved? Is it important?

("This statement seems to me to be borne out by experience and common sense, but I should change 'occasionally' to 'generally.'")

6. Ordinarily, however, vocational mathematics can only be taught in the vocational school or in extension courses paralleling the learning of the vocation through apprenticeship. Is not this generally true?

("No, I do not think this is true. But the whole thing depends on how you define 'vocational mathematics.' If you mean the large part of the mathematics that will be needed in sheet-metal work, for example, this can be taught quite as well in general classes. The technical mathematics required solely in this particular trade is limited.")

7. Two or three kinds of prevocational courses in mathematics are practicable for junior high schools; and an equal or greater number in senior high schools. Schools able to provide sufficiently large classes should offer such courses as electives. Is there any objection to this?

("There is no mathematical objection to this type of course if the classes are large enough. So long as you guard against putting any fetters on the child, chaining him to some particular trade when he may turn out to be better fitted for a college presidency, I see no objection.")

8. Several kinds of general courses in mathematics are possible in junior and senior high schools and should be made available as electives where practicable. You would not dispute the practicability of this? Would it be desirable?

("There is not only no objection to such electives in the senior high school, but I always advocate them if preceded by the junior high school. It seems to me very narrowing, however, to make mathematics elective in junior high school. I feel that we need to show the pupil at that time some of the general significance of

all the great branches of knowledge—mathematics among them.")

9. It is agreed by competent students that mathematical studies do not provide exceptional mental training towards non-mathematical fields of intellectual activity. Hence no mathematical study should be prescribed on the grounds primarily of its disciplinary value. Agreed?

("I agree to this, with due attention to your word 'primarily.' I don't know of anyone who claims or has ever claimed otherwise. But when someone says that there is no mental training whatever in any serious intellectual study, I simply feel that he is stupid and that it is not worth while to argue with him.")

10. It is doubtful if a course in mathematics could be devised of such value as a means of educational guidance that it should be prescribed for pupils of a given grade. An outline of such an alleged course would give means of more exact analysis.

("I do not know what this means. Does it mean that we should not plan a course in mathematics in Grade IV?")

11. It is very desirable that one or more distinctively cultural or "appreciation" courses in mathematics, suited to learners from twelve to eighteen years of age, should be evolved and offered as electives. Is this a theoretically possible objective? Is it practicable?

("Yes, it is practicable. A fairly good beginning has been made in the junior high schools—as good as is practicable at present. I want to see this carried into the senior high school, and I believe that it will be done, not by the professor of education alone nor by the mathematicians alone, but by a combination of ideas. To accomplish this, however, we must overcome the present feeling

among mathematicians that there is nothing constructive in the suggestions of so many professors of education. This feeling is very widespread.")

12. The following ideas held in some quarters as to educational values are probably illusory—at least they require careful examination:

(*a*) That study of mathematics is an exceptionally valuable means of giving appreciation and mastery of important and necessary formulæ. What can be said against this?

("The question is not fairly stated. I do not know of anyone who makes any claim for any special 'important and necessary formulæ.' That everyone should know the meaning and significance of a formula in general, such as we find in current literature of a popular kind, is to me axiomatic.")

(*b*) That thrift, banking, investments, stocks and bonds, etc., as these should be taught to most persons have such large important mathematical elements or aspects as to justify their being studied chiefly as topics or minor subjects under mathematics. Obviously this is capable of fairly exact investigation?

("This would be capable of 'fairly exact investigation' if honestly and intelligently attempted. The attempts made by some students to make such investigations seem to me, however, to be pathetically ridiculous.")

(*c*) That mathematics should be studied by girls as a means of helping them advise their children later in the selection of studies by these children. I should like to see this critically analyzed.

("Yes, I should like to see it analyzed, but I wish it done in a broad-minded, intelligent fashion. My contention has simply been that the woman needs a general

all-round view of the meaning of education, as a whole, rather more than the working man does.")

(*d*) That for pupils electing (under a flexible system) not to take mathematical studies there would exist a dearth of equally valuable alternatives. This is also capable of fairly exact investigation.

("I should like to see this investigation made by someone who has not too many fixed opinions to warp his judgment.")

CHAPTER VII

THE OBJECTIVES OF PHYSICS

WITHIN the last three decades physics and chemistry as high-school science studies have assumed a definiteness of organization second only to that of mathematics. But the defenders of these relatively modern but already formalized subjects are already being forced at least to hear, if not to respond to, the oft-repeated challenges of those educational modernists who are searching for valid objectives in education.

What are your purposes in teaching this subject? Are these alleged purposes worth while? To whom and for what reasons? Worth while to girls? To boys? To boys and girls of limited capacity? To boys heading for non-science-using vocations? To what extent do your present means and methods realize your alleged aims? How do you know? What are you doing to make your aims more clear, definite, valid? Why should you, a teacher of glorious American youth, a majority of whom will not go to college, bow your head to the Prussian autocracy (as some think), or to the benevolent despotism (thus others think) of college entrance standards?

Now it is just as hard to-day to find genuine justifications for the teaching of physics according to formulations and methods accepted in 90 per cent. of our high schools as it is to find such justification for Latin for boys, algebra for girls, or ancient history for both. Do not imagine that we can throw the entire blame for all of this back on the teachers. The complexity of education, and the yet undeveloped character of its basic

sciences, are in part responsible. But long before men knew anything about what we call the science of metallurgy they found out how to make steel—and sometimes very good steel—and the obligation was on them to do the best they could with such knowledge as they could get, seeing through the darkened glass. Long before men knew anything about the circulation of the blood, or bacteria or inoculations, they had to have their grandmothers and other healers and wielders of magic try to cure and to prevent the diseases to which the sons of man are heir. And some of the discoveries and practices of those forebears of our modern medical men were by no means bad, while a few of them were wonderful; but in the aggregate, as we look back, how hesitating, incomplete and superstition-ridden were the controls and procedures of our faith-following ancestors, in healing the sick, tilling the soil, controlling natural forces, working earth's ores and educating their young!

In most departments of secondary education, we are still in the chrysalis stage, wrapped up in the cocoons of blind faiths, untested beliefs, hardened customs. In the nature of the case we could hardly have done better, perhaps. Waiting the development of some scientific cues, we have at least achieved some useful results on the bases laid by faith and preserved by custom and tradition.

But some of us hope that the ages of faith are coming to a close in certain phases of this education, and that a period of questioning, criticism, analysis, experimentation and intelligent reconstruction is setting in.

Let us not overlook the several revolutions that have taken place in the teaching of physics. It required an educational revolution to give science a place in the secondary school curriculum at all. It required almost a revolution to force in the laboratory as a means supple-

mental to the text-book, and another to force in the addition of a series of quantitative experiments.

But some, at least, of our gains have turned into Dead Sea fruit. Perhaps they were from the start too heavily infected with pedagogical superstition. At any rate, we are far from being satisfied with results as we find them to-day; and we must welcome all sincere efforts to ascertain what are the sources and causes of the present unsatisfactory position (not from a comparative point of view, but from the standpoint of the educational results we have a right to expect) of physics.

It is the purpose of this chapter to suggest certain respects in which physics teaching to-day suffers from faulty aim; and, as a means of initiating discussion, to suggest certain respects in which reconstructions of objectives can be made, especially when secondary-school teachers will themselves have concertedly taken in hand the fundamentally important work of determining what, for the various ends of education should be the standards of purpose, means and methods of science instruction, instead of waiting supinely to take their cues from the higher institutions.

Suppose we take some well-known text-book of secondary-school physics, together with an approved laboratory manual, as a kind of measure of the scope and kind knowledges, skills, ideals and appreciations that are supposed to be achieved through this study—what, after all, is it all really for?

Now, of course, it is easy enough to say that these books summarize, in much digested form it is true, the acquisitions which should be made by all persons seeking certain opportunities, *e.g.*, admission to higher institutions, or desiring certain appreciations and powers valuable apart from their relation to subsequent school work.

But how are we to prove that these acquisitions should be so made? By what standards of social purpose, cultural good, economic need? It is interesting to find how chary educators are of pushing inquiries in these matters. It is sweepingly urged that a knowledge of physics is essential to the prosecution of higher college studies. What studies? Studies pursued to what ends?

It is now certain that we must reconstruct almost all our current standards of value of high-school subjects. We must endeavor to proceed from the foundations of the useful attainments (in the broadest sense of the word "useful," to include the spiritually and culturally useful as well as the materially useful) as shown by men and women in present-day society who are substantially above the average as respects those qualities which, according to a consensus of judgment of competent critics, are "good"—good for the individual, and good for society.

What do these superior persons have of the following powers (of execution) and capacities (for appreciation); (*a*) knowledge of physical facts, processes, laws, etc., essential to meet the requirements of the daily life usually encountered by all *in common,* whether, vocationally, they be housewives, farmers, motormen, sailors, stenographers; (*b*) appreciation and insight of physical phenomena (especially those studied as physics) for purely cultural or unpractical interests—rainbows, volcanoes, tides, aurora borealis, falling bodies, etc.; (*c*) mastery of those physical processes, etc., essential to effective participation in the *common* activities of electing good engineers, roadbuilders, irrigation experts, etc., to office, and of giving due civic supervision to their work; (*d*) appreciation of *scientific* methods of thinking where physical phenomena (of the kind studied, not all phenomena as the upholders of the magic of formal discipline

would have us believe) are involved; (*e*) mastery of the knowledge, skill, etc., to be derived from the study of physics, as required for their vocations?

First, then, what have the superior adults of to-day of these attainments? Second, have they achieved these powers and capacities economically or wastefully, effectively or inefficiently? Thirdly, assuming that they got what they have by fairly easy well-ordered processes, what more do we want the next generation of men, equally capable natively, to have? Fourthly, what do we want the next generation of men corresponding to those below the superior class of to-day to have?

Through some such procedure as that implied above we could determine what, under specified conditions, we should teach to all, or some, of physics. Then we could determine, experimentally in part, what methods would most effectively achieve these ends.

Within a few years, when our secondary school educators will have seriously faced the problems of making all the school education of our young people from twelve or fourteen to eighteen years of age demonstrably worth while, it is predicted that the courses in physical science will include the following, according to the size of the school: (*a*) One or more purely cultural courses; (*b*) one or more "general utility" courses; (*c*) a course to integrate with social science and (*d*) according to circumstances, several "prevocational" courses. Let us analyze in some detail these prospective objectives.

(*a*) Cultural courses in natural (as opposed to mental and social) science will be offered at intervals—possibly in the seventh, and again in the eleventh, grades. We are searching for the goals here suggested in our various experimental developments of "General Science"—which should properly be called "General Natural Science,"

since there are surely also fields of mental and of social science.

We do not know yet how to organize or administer a "cultural" course in science. We want it to appeal and interest, but we are afraid to make it "easy." We do not realize that most truly cultural courses must be pursued in the same spirit of zest and interest that we now experience in traveling comfortably in new lands, reading our favorite fiction, or that normal boys experience in scouting, real craft work, or reading the literature of adventure. Because of our ignorance, we commonly make science teaching a process of forcible feeding—often of comestibles that are not expected to be digested for several years. We wonder why our youth take to science very much as children take to unpalatable medicine.

The cultural courses suggested here need not occupy an entire year, and they might just as well be elective, as prescription works badly in this field of "appreciation" education. Ordinarily the work of these courses cannot be based on one text, even of 1000 pages. Rather we need a library of books about volcanoes, planets, tropical animals, electricity, deep mines, sub-sea wonders, aeroplanes, digestive fluids, explosives, selective plant breeding, wireless telegraphy. Furthermore, we cannot expect all the pupils to keep nicely abreast in class work. They will come together for conference, at which those who have something worth communicating will be given opportunity and facilities to that end. A zealous teacher will often indicate the range of opportunities for reading, observation, problem solving, experimentation, project work—and he will help steer the most difficult of it all.

What are the expected products of these cultural courses? Chiefly those poorly analyzed but invaluable products vaguely described as "interest excited," "curi-

osities satisfied," "intellectual experience," "appreciations," (of the wealth of things, of the enlightening powers of science, of the vocational opportunities open in scientific fields, etc., etc.), which are rarely the outcome of present formal methods.

(*b*) The "common" life of most of us as individuals, quite apart from the requirements of our vocations, and chiefly in connection with our "consuming" activities or activities of non-vocational utilization, are in a measure capable of being made more comprehensible and serviceable by *some* (not many) applications of knowledge of physical science. In personal hygiene are some opportunities. In buying clothing, furniture, and houses, in reading books and newspapers, in eating food, in using light and heat—and, possibly, in many other directions, it may prove possible to lay better foundations for wise action than are now provided by our schools, even by a certain amount of *obligatory* study of special kinds of physics. But before we begin making prescriptions, we should know what we are about—which is not the case now.

(*c*) Similarly, we probably need a little specific knowledge of physics to intercalate with our social science as a means of making us the voters (that is, coöperative employers of public service) that we should be. What that science should be, and with what degree of intensiveness it should be studied, and under what conditions, we have only the vaguest notions at present. But I am sure the field is there waiting to be discovered and developed.

(*d*) Finally, our larger secondary schools, at least, should offer courses in "prevocational" physics. The term "prevocational" is here used only to designate those studies which may conveniently be offered in a non-vocational school and which are demonstrably preparatory to,

and functional in, a vocational school or vocation later to be entered. Studies genuinely prevocational are also only those which have no other important or significant or at least primary values. Hence trigonometry taken in high schools by prospective engineers is prevocational, while ordinary English clearly is not.

What are possible lines of "prevocational" physics? Can we disentangle from the range and wealth of physical science units that are obviously prevocational for, respectively, prospective: (*a*) gardeners; (*b*) electrical engineers; (*c*) homemakers on budgets of less than $2000 per year; (*d*) "dryland" farmers; (*e*) workers with gas engines; (*f*) stenographers; (*g*) sailors, etc.?

Can we so guide students that the majority, at least, electing these courses, will not be wasting their time? And can we present the work of these courses by methods so exacting and practical that the contributions made shall be important as stages towards vocational fitness? And can we see to it, that we can so teach these subjects that as secondary results, by-products or as means to known further ends, will come stern discipline, severe mental training, positive appreciations of scientific method as these apply in, and associate legitimately with, the particular vocations respectively to which the subjects designated above are prevocational? If we can do these things we shall have made educational contributions of no mean importance.

If we are going to help find these prevocational subjects, we should separate ourselves first from most of the established traditions of physics teaching. They mislead us in this region badly. Probably we could get best results by taking our cues from recent developments in vocational education in the search for effective "short units" of training and instruction.

The spirit of the age is giving you and me *carte blanche* in the reorganization of our ideals, theories, principles and proposed programs of secondary education. It will not, however, permit us to upset a school system, a school or a program in process of application until we shall have done hard thinking (first individual, then joint), experimentation (on a scale and under conditions that will not work harm), and documentation of findings. The standpatters and the revolutionary anarchists in education are both pestilential. What can we do somewhere between these extremes? But "self-determination" (through collective action of the service group to whom society has delegated functions organized for particular ends) is essential—to physics teachers, to high-school teachers, and to high-school principals no less than to "small nations," or peoples reared in the shadows of autocracy.

CHAPTER VIII

SOCIAL FUNCTIONS OF THE FINE ARTS

MEN long ago sought to draw distinctions between the "useful" and the "fine" arts—the practical arts whereby we live and the æsthetic arts whereby we are enriched. The distinction is not now generally approved; it is too suggestive of aristocracies, of artificialities. It seems unfair to deny that the useful can also be fine or that the beautiful can also serve great uses.

Nevertheless, sociology needs categories of the kind suggested by the old classifications. It needs them because they stand for certain unlike facts in the objective life of mankind. The sociologist cannot hold that the beautiful may not also in the highest sense be the useful—since he recognizes that at various stages in its evolution upward society has used the æsthetic sensibilities as powerful levers of progress.

But he is forced to distinguish the æsthetic values from various other kinds of values, partly for the reason that they serve different and not infrequently opposed ends. Especially is he now concerned with these questions here in America, because there exists probabilities that the powers of the fine arts over human life are declining rather than growing. He is especially impressed with the waning powers of the æsthetic arts in the major concerns of social life.

It would appear that sociological writers—except, possibly, Herbert Spencer—have fought shy of the difficult subject of art.[1] One of our greatest humanists, Tolstoi,

[1] This rule, of course, is not wholly without exceptions, *e.g.*, Ross: "Social Control," ch. xx; or Hayes: "Sociology," pp. 499, *seq.*

has, however, somewhat compensated for their omissions. To the educational sociologist the place of art in life is of the utmost importance, especially because contemporary social aspirations tend strongly towards giving art a large place in education. But our programs of art education will necessarily long remain as indeterminate, unsubstantial, and hobby-ridden as they have been during the last fifty years, if we cannot agree upon some findings, provisional if none better can be had, as to the *social values* that are to be expected from the various forms of art use.

I. PRESENT DEMANDS

Various critical Americans, aided and abetted frequently by visitors from abroad, have for many years been insisting that this country sadly needs more and better art. Our inartistic life has been pitied, denounced, derided, made the object of "uplift." At first, with the confidence of successful frontier folk, we refused to believe that our conditions were as bad as our critics imagined. We were wealthy and reasonably happy. We had national health, and ours was opportunity. We were not keenly conscious of wants which we could not satisfy. We knew little about art, and that little often suggested scroll work, triviality, meretriciousness, even refined sensuality. Artists in all lines as well as their followers among the non-working women who were coming to be the decorations of our rich commercial life, we hardly pretended to understand, but we were sure that we held them and their works in small esteem.

Our critics, however, have achieved their objects. We are no longer complacent over our insensitiveness to art and our art-lacking surroundings. We have become self-conscious, abashed, convicted of many serious æsthetic shortcomings; and we are now eager to amend our ways.

We have resolved to give art a fair chance, and to require that our sons and daughters shall not be, as we were, deprived of opportunities to have the satisfactions and to exhibit the cultivation that are alleged to come from seeing, hearing, feeling (and even tasting and smelling) those things which superior judgment and taste call "artistic." We have been gratified when millionaires gave us art galleries. We have been glad to make it possible for our wives and daughters and a few of our sons to travel in Italy, France, and Belgium where "art" was to be found in largest quantities. Our women's clubs have taken the matter of self-culture in art seriously. Americans no longer have, or at least express, sympathy with the Puritan's pose as to the sinfulness of catering to æsthetic sensibilities.

We have tried especially to develop art education, in the more inclusive sense of the term, as a part of our general education. During the last fifty years popular demand has forced into school and college curricula quite generally much English literature, and some drawing and music. Small but influential groups of our more ambitious citizens have also at times succeeded in having taught in the regular schools, or in special schools and classes organized for the purpose, dramatics, artistic dancing, painting, modeling, artistic craftsmanship, home decoration, and landscape gardening. To each and all of these newly awakened interests Europe has contributed, along with a few first-class exponents, a horde of self-promoting avaricious exploiters of popular credulity and private wealth. Schools and cults and fads have flourished. The decorative women of the rich, the idle and sterile women of the apartment-house dwellers, the ambitious daughters (and a few sons) of families rising rapidly to higher standards of living, the free lances among our intelleetu-

ally emancipated womanhood, all these have contributed in America toward a vast, collective, conscious striving for more "art" in life, some release from barbarity and vulgarism, some translation hither of European or Japanese standards and methods of execution and capacities for appreciation.

In some instances the results of this striving have been wholesome and profitable, if judged by their effects upon certain small classes or groups of people, in the way of contributing to their collective good-will, earnestness, sincerity, unaffectedness, and standards of moral conduct. We know of a few centers where the cultivation of music has ministered to rather than detracted from neighborliness, social purity, and simplicity. Occasional groups of craftsmen can be found whose members are genuine men and women, unaffected by avarice, jealousy, or besetting impulse to pose. Here and there are moderately gifted writers who have resisted the temptation to produce wares for the largest market, and who have nevertheless been discovered by a moderate circle of appreciative readers.

But it must be confessed that, viewed in the large, the results of our great campaign of education and uplift in matters artistic appear so far to be disappointing. As users of literature the American people do not yet seem greatly to prefer the better to the worse. We expend millions for short stories and longer novels, and we lionize the writer of a "best seller"; but we provide a poor market and little appreciation for the genuine poet and essayist. We certainly support the drama generously (if we include under that term moving-picture art), but we make no marked demand either for repeated presentations of the great classical dramas or for those modern dramas that exhibit originality of conception and artistic workmanship. Some hundreds of millions of dollars are ex-

pended annually to provide music in America, but only a small portion of this is paid to support other than fugitive and tawdry stuff. Our millionaires in a few cities generously support the opera, but whether from genuine desire for the art or from motives of vanity and display, it is at times hard to say. We dance much, but, except when momentarily moved by the appeal of fashion, we are cool toward folk-dancing and art-dancing. The plastic and graphic arts are everywhere taught in public and private schools, and hundreds of our young people of real or imagined talent annually set out to become painters, sculptors, or architects. But our largest expenditures as a people for art products embodying form and color go to magazine publisher, advertiser, bric-a-brac manufacturer, and the long line of caterers to the various appetites for bodily decoration.

Notwithstanding the growth of wealth available for the satisfaction of the less pressing needs of life, and an undoubted desire on the part of educators and a considerable portion of the public for better things artistically, it seems to be true that as a people we are advancing little if at all as respects "love of the best." But those authorities who at times despair of American taste seem almost equally pessimistic regarding prospects in other countries. Are we not told that modernizing of Japan has ruined the fine craftsmanship and cheapened the public taste of that country? Applied art makes slow progress in England in spite of the millions expended by the agencies that first grouped themselves around South Kensington. Germany, aspiring to conquer a world's commerce, plunges into vast schemes of art education, the quality and permanency of the results of which are seriously challenged even at home. France continues to give to the world a

profusion of fine- and applied-art products, but her schools are distracted by cults, and the social mission or significance of even her best art remains yet a matter of uncertainty and debate. Germany maintains perhaps her standards of musical appreciation, but, if her best critics are right, drama, poetry, fiction, and dancing certainly tend there as elsewhere toward lower levels as regards both production and appreciation. And all of this in face of the unquestionable fact that the whole civilized world is (or was before 1914) possessed of vastly more leisure, wealth, and education than ever before!

To educators, publicists, and statesmen, as well as to all persons gifted with sensitiveness toward things artistic, it is a serious and disturbing matter that art as regards its evolution and social vitality seems to be so much in the doldrums. What are the causes of this condition, and what does it portend? In our public schools alone we now expend millions of dollars annually in trying to teach our children to appreciate and desire the better things in literary, musical, graphic, plastic, and terpsichorean art. Are we doomed always to find the ground slipping away from under our feet, and to discover that we are simply modern Mrs. Partingtons sweeping back in utter futility the waves of printed pictures, "movies," "canned music," hackwritten fiction, hotel dancing, and factory-multiplied artistic "utilities"? Must we continue to find, indeed, that as one of the penalties for our sins our art leaders and spokesmen have themselves been afflicted with a confusion of tongues, and have scattered into the wilderness of conflicting cults, irrational counsels, and wilful blindnesses to the essential characteristics of the period in which we live?

The situation is therefore a serious one if we admit

that the assumptions which are commonly made as to the social significance and essential need of high standards of art production and appreciation in civilized society are indeed correct. But we must not forget that these assumptions are usually derived from a historical consideration of other civilizations than our own, and chiefly from those representing other stages of evolution than the present in our own. May it not be possible that occidental civilization has reached a stage in its development when the general social need of art of good quality, at least in some of the forms which have counted most in humanizing man and upbuilding societies, is less vital and compelling than was formerly the case? Perhaps the functions of art in ministering to the primal needs of society are not what they once were, and so, as a consequence, while society may still be willing to spend of its energies and resources freely on art, it now refuses to take that art seriously because it cannot make of it a means toward realizing the more serious and worthy things of life. Strong men decline to make the production of art works a career, although they are willing to see their daughters follow it as a lightsome and not too prolonged vocation. When in need of recreation or a light avocation, these same strong men are likely to turn to art for its sedative and diverting qualities; or when, with wealth accumulated and leisure available, they seek outlet for unexpended energies, they may find in art gratifying opportunities for patronage, self-education, and public service.

2. THE SOCIAL PROBLEM

To the student of history or, more broadly, social evolution the fundamental importance of the various æsthetic arts that make appeal to and through the emotional nature

of man is apparent.[2] *Homo sapiens* comes into the world equipped with instincts which cause him to react strongly to the stimuli, among others, which these arts have been invented to provide. One kind of music can move him to worship, another to fight, another to love, and a fourth to work in concert. Perhaps a fifth, sedative and lulling, can give his jangled nerves much-needed rest. The drama at its best becomes a means of making men passionately aspire after or despise the forms of conduct in themselves or others, toward which end it is the desire of dramatist and actor to move them. Through painting and sculpture have been communicated countless messages to men and to women, young and old, who could receive vivid suggestion and direction through no other medium. Epic and lyric, the finished evolutionary products of recital, chant, and folk-song, long served as vital means of disseminating and socializing ideals, lores, sentiments, and percepts. Dancing at its best was doubtless long a valuable means of symbolizing for peoples only part articulate, various forms of coöperation, including those of defense, worship, and mating. Gracefulness of design and beauty of decoration, applied to the furnishings and utensils wherewith life must be lived and work done, served to give definiteness of standards and permanency of associations to the still plastic sensibilities and inclinations that make for domesticity, acceptance of routine, pride of craftsmanship, self-sacrifice, accumulation of wealth, and respect for unseen powers.

[2] A sharp distinction must, of course, be made between "art," or "æsthetic arts" and "the arts." The latter (as "practical," "industrial," "mechanic," and "useful" arts, having to do with man's need of obvious utilities) are, in spite of similarity of names, often remote from "arts," and especially "fine" or "pure" art. The fundamental quality of "art" as here considered consists in its appeal to æsthetic sensibilities, and as a consequence of the appeal thus made its power stimulate, modify, or repress specific tendencies toward behavior, conduct or action, immediate or ultimate, individual or social.

If we possessed sufficient data whereon to base sound conclusions as to social evolution, we should probably find that many forms of art had, during the long periods when they possessed great social vitality, a very large "survival value." That is, social groups that developed widespread and keen appreciation of these forms of art, closely accompanied by the demand for, and summoning forth of, great producers of the strong and vivid things in such art, other things being equal, possessed thereby great advantages in the struggle for existence as against other groups not thus reinforced and fortified. Under primitive and elemental conditions of society at least, all forms of coöperative action and of social control of the individual in the interest of social behavior seem to involve and to require abundant means of making direct and strong emotional appeals, such as art, among other agencies, provides. Song, drum, and trumpet bring men together for war (doubtless the earliest crucial form of coöperation); chantey and tattoo make toil in concert endurable and even joyous; pipe and chant mold the spirit for worship. Carved, painted, and woven decoration have served to give verity and tangibility to legend and tradition, and thus to promote like-mindedness among clans and tribes and sects; while painting and statuary communicate ideals and sentiments for which words are as yet inadequate. Probably all forms of persistent and elaborated art (confining the term chiefly to those products of human skill which are characterized by the emotional rather than the intellectual appeal which they make) have indeed had for long periods a large "survival value." They were therefore vigorously approved and cultivated because of vague recognition of that fact—such recognition itself being likewise a slow product of intuition and experience.

But do not needs similar to those confronting early societies for close coöperation and generous mutual aid still exist to-day? Do not these needs grow daily more intense and more pressing? Are not conditions such to-day, especially in all civilized countries, that the demand, conscious or unconscious, for all the forms of appeal which art can make or reinforce is waxing in volume and intensity? In the complications and interdependencies of modern society do we not more than ever require vigorous use of all social means that will integrate groups of men for work, defense, worship, and government; that will insure the right formation as well as stability of family life; and that will promote social integration and concerted effort generally? Can we allow to fall into disuse any instrument by means of which the imagination, ideals, sentiments, appreciations and habitual attitudes of the individual can be so shaped that he may give to society the desirable conduct under all the involved and obscured conditions which render possible innumerable kinds of behavior, social or anti-social?

In brief, nearly all art had in the past quite definite, even if imperfectly manifest, social functions; it gave direction and reinforcement to the great social forces, those that made for the cohesion, unity, strength, persistence and wholesomeness of society, and, thereby, as a rule, for the ultimate self-realization of the individual. This was conspicuously the case with all "great" art—the art that, though sometimes at first emanating from, and patronized by, a few, ultimately appealed to the thousands, the art that was given wide publicity in places of assembly, that received approval and support at once of rulers and of ruled. Has art to-day, or can it, in its nobler manifestations, be made to have those same definite social functions? The social forces that thus once utilized and

magnified art are still operative, certainly, but do they or can they make use of great art, noble art, serious art, as necessary means? In a fundamental sense the answers to these questions will probably interpret for us in part the present status and the probable future of the higher forms of art in America and in other countries controlled by the conditions and requirements of modern civilization. We must ascertain whether art still possesses the qualities which under present-day conditions, give it definite functioning possibilities in strengthening and orienting the social forces that, operating through the sentiments, understandings, and ideals of individuals, produce the society which weathers storms, survives, and ministers to the end of guaranteeing "life more abundantly"—the final known test of civilizations.

It is the belief of the writer that an examination of those forms of social activity which are most intimately involved in the survival and expansion of civilized societies will show an increasing dependence upon what may be called the helpings of science as contrasted with the helpings of art. Art still has its place in life, but not the prominent, proud, and glorious place it once had. Art can no longer lead; it must follow. It can no longer command; to make itself acceptable it must rather divert and entertain. In the great works and in the momentous crises of life man is more and more to be supported and reinforced by what he has accumulated in and for himself of scientific knowledge of the world, of assured insight into his own powers, and of definite mastery of natural and social forces. In considering these hypotheses let us examine successively a few of the fields of human conduct and activity in which the social functions of art seem to have diminished in comparative importance while the dependence upon science has increased.

3. HISTORIC VALUES

The problem of obtaining concerted action for war has always taxed to the utmost men's capacities for co-operation. At every point in the recorded history of man we find him using music, dancing, bodily decoration, sculpture, painting, legend, poetry, oratory, drama—in fact, all manner of appeals to the emotions through the senses—to arouse the combative instincts and impulses and to produce coöperative fighting qualities with their accompaniments of endurance, loyalty to leaders, comradeship, and self-sacrifice which make possible the overcoming of enemies and the survival of the victors. When the defense of nationality is at stake, when the area over which concerted action must take place is large and the time of action long, the uses of art in producing and sustaining the moral and even spiritual qualities become marvelously varied and complicated. Heroic painting and sculpture, patriotic song, spirit-stirring music, ideal-arousing tale, and exalted oratory are all enlisted. The extent to which in very recent times this appeal to art as a vehicle of call to action has been made, sometimes deliberately, sometimes only as a revival of old customs and the belated expression of half-buried instincts, is one evidence of the persistence down into modern life of art-forms as a means of social strength and survival.

Nevertheless, though war to-day is a no less serious business than ever before, it is clear that in it, pragmatically considered, the various art-forms no longer retain their relative importance. Men no longer dance to the tomtom to arouse the fury required for the raid. They do not march to battle to the sound of trumpet, drum, and fife. They sing songs in the trenches, but, if report be true, these are not songs of rage, valor, or exaltation. Our

soldiers must now discard the ornamenting sword, shako, epaulette, showy-colored uniform, and decorative helmet. Rifles and cannon no longer bear inscriptions delicately traced and beflowered. We say, indeed, that war has lost its glamor, its appeal to the ecstatic and heroic emotions. Smokeless powder, long-range gun, spying areoplane, mine, and barbed-wire snare have rendered war a form of activity in which the simple emotional appeals have necessarily a subordinate place. Clarity of understanding, trained intelligence, stored knowledge of scientific procedure, coldly clear vision—these are the personal powers that are brought to the fore. Patriotism must be identified with the clearly understood higher forms of self- and family-interest, else it has little meaning in and for modern conflict. We say modern war evokes no great poetry, perhaps little great fiction. Of course not; but as the price of national existence and individual liberty it evokes science, organization, method, prearrangement, calculation—the unemotional things of life. To the building up of all of these, the art-forms that strike chiefly and immediately toward the keener emotions and sharper sensibilities have little to contribute. Action must now be based relatively more on technical comprehension, less on intense and personal feeling. A background of ideal, shot with sentiment and emotion, there must always be, of course—perhaps more penetrating, pervasive, and enduring than ever before—but this is something not greatly to be affected by the crude appeals which the simple, striking, forth-right art-forms of the past have made. It grows from social understanding, the perceived ramifications of socialized self-interest, the comprehended significance of material aid and fair play. "With the songs of the North, the South would have won" in the Civil War, someone has said. Well, it would have made a great dif-

ference a thousand years ago, some difference fifty years ago, but probably none in the wars of to-morrow.

Art, at least as we have thus far defined and known it, has a diminishing place in war. It yields to science. Enlistment is hastened, it is true, by gaudy and imaginative posters; marching recruits sing "Tipperary"; "canned music" is welcomed in the trenches; and Kipling's tales furnish pleasant relief from tedium. Art for diversion, relief, as a sedative, yes; but as a means of inspiration, as a force that counts in the final tale—hardly.

At certain stages in the evolution of societies it is religion that has evoked the most potent forms of art, especially those that affect and move the multitude. Appeal to, and propitiation of, respected and feared dieties have always served to bring and hold men together. Worship in common has doubtless always had a large survival value for those groups which supported and controlled it effectively. In the various forms of worship, art with its powerful appeals to the feelings has commonly played a large part. The unseen gods in imagined forms have been given representation in every kind of plastic material. The most cunning builders, craftsmen, and decorators have been employed to beautify places and accessories of worship. Vocal and instrumental music in a thousand forms has been used in praise of, and appeal to, the gods, and as a means of drawing others into the circle of worshipers. Religious revival and Salvation Army campaign always utilize in full the strong, simple arts which make direct emotional appeal.

And yet is it not fundamentally true that noble art or strong art or fine art is less urgently demanded and less vitally used, on the whole, in worship to-day than among the people in prescientific stages of development? Those religious organizations which reached their full fruition

prior to the last half-century still retain in large part their historic instrumentalities, but it is probable that the more emotion-arousing of these steadily diminish in potency. If this is so, what is the explanation? Undoubtedly, again, the cause must be found in the pervasive spread of scientific thinking, rational action, and an increasing demand for intelligible sanctions for social behavior. Among civilized peoples deities become more remote, more abstract, less anthropomorphic. We think of them less than formerly as possessing sensibilities to be appealed to through beauty of voice, dance, incense, decoration. Churches change tradition slowly, so it is not possible for us accurately to estimate the actual social vitality of art applied as a means of worship to-day among peoples who have become accustomed in other relations to view a substantial part of their universe in terms of the known, the scientific, the personal. But one notes the social activities of the modern church, the practical character of its architecture, the professionalizing of its music, the appeals to understanding in its sermons, and the tendency toward the merely decorative in its trappings, and concludes that the great arts of appeal to the emotional nature play a diminishing part inevitably in modern worship.

The extent to which art was used as a means of stimulating primitive man to prolonged and arduous work is not well known. On the sea and in harvest field chantey, rowers' song, and field melodies have survived to yesterday. The "house-raising" festival and "husking bee" are probably survivals of social devices toward company effort which were once widely used. During the thousands of years when men were learning to hunt, fish, herd, till, harvest, clear forests, raise houses, and build roads together, innumerable devices making æsthetic appeal were certainly evolved. That festival, folk-song,

legend, drama, dance, and pageant were favorite means is evidenced by the historic remains which can still be studied. It is said that forethought and thrift among present-day tribes of tropical regions can best be produced through holding in prospect reward of gaily printed cloths, bodily decorations, perfumes, and the music of the phonograph. Our European male ancestors gave much heed to the decorations of their persons with bright-colored trappings which to-day survive only in the dress uniform of the military officer, but which, curiously enough, seem also recrudescent among the ceremonials of those who most nearly constitute an American *intelligenzia,* namely, our college faculties. It has been no light task for societies in the colder regions of the earth to make of primitive, individualistic, labor-hating man a social citizen, coöperating readily, toiling persistently, and saving thriftily; and in this task art once played a large part.

But it does so no longer. Men seldom sing as they work. Festivals no longer directly crown a recognized task accomplished. Providence is cultivated by other means than folk-song and drama. Our boys are contemptuous of the seductive tales of thrifty and industrious exemplars.

Yet it is indubitable that we now possess in larger measure than ever nearly all of the social virtues that have to do with economic well-being. How are we producing these virtues in each generation? Largely through appeals to understanding, to conscious self-interest in the individual; and also through organization of labor under the wage system and through the segregation of economic opportunities—hunting-grounds, fishing-streams, nut-bearing trees, tillable land—by means of private ownership. Only in time of crisis or revolt does the " Marseillaise " of the expatriated stir the passions to demand a new eco-

nomic adjustment, and bring men into step for a new form of coöperative effort. Doubtless the passion for the possession and ownership of that which makes æsthetic appeal—the jewel, the gown, the handsome saddle, the fine house—still lures men and women to toil even slavishly. But does the conscience of the country approve such use of the æsthetic response? Does it not rather frown upon it, as we frown upon that taste which seeks gratification in perfumery?

The suitable mating of men and women, so fundamental to sound social growth, has also involved historically the employment of every known form of art appeal. Love song, incense, body decoration, poem, dance, tale of precarious courtship, and the drama of passion or affection, all these, in multifarious form, evoked, irradiated, and brought to fruition the primal sex impulses, thus beautifying, ennobling, and stabilizing the various stages of the approach of men and women to, and union in, the family relationship. Can it be possible that in this field of human activity, too, art tends to lose its potency as a means to the realization of purposes socially worth while?

It is certainly a fact that the use of these art media in the preliminaries to human mating (otherwise marriage and parenthood) is diminishing in civilized groups. In the upbuilding of those types of family life that must constitute the sure foundations of a sound society we see everywhere displayed an increasing rationality, cool understanding, and intelligent regard for consequences to the individual and to society. Understanding men and women do not to-day, as a rule, lay the foundations of family life in disregard of economic, hygienic, and other social considerations; consequently they affect less, and yield themselves less to, the various forms of emotional

appeal and stimulus of which our more naïve progenitors made such use.

We do still, indeed, expend time and energy heavily on forms of art which seem intimately associated with mating and other expressions of the sex instinct. We have the unending rivalries of our women in decorating and ornamenting their persons, ends to the subserving of which they have drafted some of the most highly trained of the craftsmanships of jewelers, hair-dressers, weavers, garment-makers, and pharmacists. The elaborate artistry of the stage in its ballets, vaudeville songs, and "modern" dramas seems to center chiefly in cavortings about, and lubricities with, the sex life. The graphic arts applied as adjuncts to advertising and story-telling also do much to reinforce the sex appeal. Opera, "canned" and chamber music, dancing, fiction, and even modern modes of travel and outdoor recreation all seem permeated with endless varieties of the longings, obsessions, dallyings, and unwholesome effluvia of the primal instincts which are basal to the family life. Where marriage is arranged by parents—marriages of prudence—art flowerings seem to be developed chiefly to elicit and adorn wayward coquetries and illicit unions. Even the short story and the novel, to-day the most vital of the forms of art interpreting, irradiating, refining, and inciting the primal sex and sociability instincts toward the complex relationships involved in family groups, are disproportionately devoted to the unfortunate short-circuitings, the abnormalities, and the perversions of the mating impulse.

But though we are often oppressed by the variety and magnitude of these developments, we must recognize that in a country like the United States they are far from being of fundamental importance. We should realize that these various forms of art-based activity are in part but

elaborated manifestations and derivations of the play activities (including the sports of hunting and competing) possible to a prosperous people; and in part the manifestations of a pervasive morbidity always found in societies where individual prosperity and complicated social organization rapidly replace conditions of frugal life and simple group structure.

In other words, though we may seem to give art a large place in the fundamental and enduring mating activities of modern civilized society, such is not in reality the case. We leave the exercise of art in large part to the hangers-on, the philanderers, the "play boys," the self-seekers, the habitués of the purlieus, of modern society. These naturally demand little in the way of madonna pictures, serene love songs, tales of "true love," simple gownings, dramas of childhood, folk-dance; the multifarious forms of art which they evoke and reward are flaunted on the "White Way" of every city. In the meantime, the family as an institution survives and becomes more effective; in spite of the misgivings of those of us who see it chiefly under the artificial conditions of large cities, it is probably becoming more wholesome, more socially serviceable each year, as judged by the final standards of its excellence, namely, as an agency for bringing a reasonable number of children to competence for membership in the society of adults. A constantly larger proportion of men and women enter upon the family relationship with open eyes, fuller mutual understanding, and stronger determination to make their lives count well for self-development and right parenthood. In their mating, reason, understanding, and even science play an increasing part; they cannot afford to yield themselves to the emotional incitements and pointings which the art of to-day even in its rare nobler forms can make. Only the irresponsible ne'er-do-well dances

himself into marriage; only the silly she-fool embarks unthinkingly on motherhood, unguided by reasoned consideration of its demands and responsibilities. Art in its currently known forms cannot serve well as a means to the intellect-guided, affection-based unions required and in growing degree found to-day—such seems to be the verdict of those who contribute most to the making of sound family life.

4. NEW VALUES

Defense, worship, work, mating—these represent four of the fundamental forms of activity which at all stages of human evolution have been essential to survival and progress. The various forms of art have been freely used in the past as means of organizing, intensifying, enlarging, and giving persisting significance and fruitfulness to these activities. The evidence seems to indicate that in all these major fields art as a means tends steadily to be replaced by what is here to be called science as a means—that is, the organized and tested knowledges and instrumentalities of science.

Are there then no other spheres of human activity in which art has played and can still play a vital and important part?

It seems to the writer that as far back into the origins of society as we can go we find the beginnings of at least three minor social functions of art which have continued vitally to persist and even develop into the present, and which seem to promise still more extended developments in the future. These will be called here, respectively, the recreative, the advertising, and the refining functions of art in social life. These deserve to be called derivative, secondary, or minor activities as contrasted with the four groups of activities analyzed above, because they are in-

volved much more with the enrichment or softening of life than with group survival and fundamental progress.

Having met and passed crises of passion, strain, and change of fortune, man seeks to recreate himself, to recover from the effects of too intense or too prolonged or too painful activity. He seeks diverting or avocational activities. These demands of the active spirit give rise to vital forms of art which satisfy æsthetic craving without unduly straining the emotional nature. The grief-stricken turn to the solacing song and the comforting music of instruments; the wearied muscle worker, resting, recreates himself with light literature, diverting music, moving picture, stage pleasantries, boon companionship, and the coarser satisfactions of drink, food, narcotic, and revelry; while the tired brain-worker, also making demands for soothing and diverting music, show, story, picture, dance, and food catering adds thereto effective demands for travel, club companionship, museums, sports, and, when financially able, building, "gentleman" farming, and collecting, in many of which activities he wants "taste," elements of the artistic, harmonies of form, color, sound, and thought. He does not want, in fact he is likely violently to resent, serious drama, "high-brow" literature, and elaborately architectural music. As for architecture and painting, when presented for serious contemplation and study, he simply "does not see them."

We have here among all human beings, from the child being soothed to slumber after a busy day, to the millionaire seeking surcease of the intense preoccupations of business life, a wide, varied, and growing demand for certain ministries which art in some of its endless forms best can give. We know as yet too little of the psychological results of specialized work, or of the enduring sedatives of life to criticize adversely these ministries,

even when offered by so modern and uncertain an art agency as the "movies."

We find, in the second place, that in practice art is being increasingly called into service for publicity in the endless and protean forms which that form of diffusion of information which we call advertising assumes under the seeming necessities of modern life. Advertising of one kind or another besets us at every turn. It is the purpose of advertising to make appeal, sometimes to the understanding, more often to the feelings, of those who are perhaps reluctant to heed. Frequently advertisers must win their way through obscuring understanding and through intensifying appeal to sentiment, taste, prejudice, passion; hence their methods may resemble those of wooers of old.

Advertising is not confined to those only who have goods to sell. The propagandist of faiths and ideas is fast learning new methods of publicity, among them those that employ the æsthetic arts as means. In a fundamental sense man's desire to give publicity to his power, his achievements, his realized ambitions takes the form of large display of the embellishments of his person, and his possessions, as seen in the attention-commanding character of the architecture of his house, the trappings of his *entourage,* decorative character of his women folk, and the munificence of his largesse. In large part doubtless, the lavish enlistment of art by the modern woman of wealth and leisure in the embellishment of her body and her personally controlled surroundings is due far more to her strivings to give publicity to her success than to the requirements of the mating instinct.

To a peculiar degree the requirements of advertising are affected by competition. It is not apparent that the extension, elaboration, and artistic perfection of adver-

tising is to any substantial extent bound up with the competition that involves race or group or stock survival, as are, or were formerly, very certainly, work, war, worship, and mating; but, generally speaking, success in competitive business at any rate is most surely dependent, under modern conditions, on advertising. Hence the tremendous and still growing demands of advertising on all forms of art, and especially upon the graphic arts. It may be indeed that the expenditure of energy upon advertising will prove to be in large measure socially unproductive or even harmful, as is expenditure of energy on alcohol, opium, elaborate personal decoration, or gambling, but for the present we see this form of public appeal or publicity making of art a busily employed handmaiden.

The third social function of æsthetic art which seems still vital persists in all those fields of activity where, the ends of utility having been served, man desires refinements of form, color, organization, communication, and service such as reduce obtrusiveness, eliminate the non-essential or irrelevant, and tend to foster pleasant associations. In the world of material things this function of art is analogous to the sedative or solacing or recreative function of art in the world of things mental and spiritual. It is here that the useful arts come into handclasp with the so-called fine arts.

The man of pragmatic inclinations wants a house that shall certainly provide desired space and arrangement accommodations; it must in addition thereto be suitably weather-proof, durable, and economical. Having provided for these useful purposes he desires that sharp corners be rounded, inharmonious projections tapered into graceful shapes, raw-construction work tastefully overlaid, and perhaps that a touch of decoration be added. People, not yet art-crazed, desire furniture that is restful,

safe, and durable; having these demands satisfied and within modest and restrained limits, they seek harmony of form and color as desirable adjuncts. To the practical man speech is essentially a useful means of intercommunication; and always subordinate to the requirements of such use he desires that speech be musical, moderately decorated with figure and ceremonial form, and faintly touched by sentiment. The craftsman, if of right mold, buys his tools with discriminating study of their practical serviceability in his work; but being assured of these qualities he places also an approving valuation on their beauty of form, color, suggestiveness, and even faintly upon their decoration. To all real readers of books it is only the stored wisdom of the pages that makes primary appeal; this end being guaranteed, secondary considerations as to shape of volumes, decoration of covers, and artistry of printing receive attention.

The multiplication of possessions as made possible by modern civilized life, rising standards of living, and man's increasing power to render materials and forces flexible to his will, all serve to give increasing vitality to what are here called the refining functions of art. But there is in this field a constant temptation to subordinate the lesser to the greater function. We seem easily to be able to educate ourselves, under the influence of competition for possessions and especially for display of possessions, to the point where not the serviceability of the article, but the æsthetic art conspicuously applied in it becomes the chief attraction. Children were once taught painfully to make "beautiful" handwriting in its shadings and flourishes—whether it was legible and rapid or not. At times the desire for beautiful work in bookmaking outweighs unduly the demand for the really significant contents of the volume. We are overwhelmed

with prevailing demands for furniture, fabrics, tableware, and raiment that shall primarily satisfy æsthetic sensibilities and only incidentally strictly fundamental needs. The connoisseur, in things embodying applications of art, is often a seducer. He perverts useful functions to base ends. Nevertheless, it is in this domain that our schools of "industrial art" will find their largest and most useful function. They at least should avoid the temptation to yield to "short cuts," to make of pleasant gratification an end, to prefer, figuratively speaking, the painted woman of the streets to the virtuous matron of the home.

5. THE PROBLEM

Art is in the doldrums at present because those of us who are most art-sensitive cannot or will not see that the world has moved past the stage where art can easily render its mightier services—that is the hypothesis, unpopular though it be, which is here submitted for consideration. If men prove to be able increasingly to control their desired destinies through the means that we call science, why should the world again mass the desires and strivings that formerly in the ages of faith and feeling produced a Homer, a Phidias, an Angelo, a Wren, a Palestrina, a Shakespeare? We shall for ages continue to develop those individuals who have their interests in the historical aroused by Grecian sculpture, Gothic architecture, Renaissance painting, German music, seventeenth-century drama, and eighteenth-century poetry; and it will be a precious thing to have those gifted connoisseurs in our midst. Others will arise to preserve and develop curious interests in the psychology and architecture of Wagnerian opera, Russian ballet, futurist painting, and "problem" drama; and we cannot afford to suppress or discourage even these variants. Perhaps we shall yet discover through

them, that some of these advanced "art forms" have, after all, some real social significance for modern times and conditions, and are not merely symptoms of art hysteria, or "sports" produced through breeding and cultivating the art impulse in unnatural soil.

For in some form there is always the possibility that art as one of the great engines of human progress, as an indispensable means of social evolution, may once again be in demand. We can conceive a world of human beings saturated with knowledge of "what" to do but in spite of clearly perceived self-interest weak in motives leading to action. We can conceive a situation where notwithstanding endless and perfect laws the will for justice might be so weak as to require the appeal to sympathy and passion of a "Marsellaise," a "Song of the Shirt," a "Burghers of Calais." We can conceive a series of photoplays leading out from the "Birth of a Nation," as the Gothic cathedrals grew out of little stone churches, to the point where the feelings of countless millions would be swayed into uncompromising hostility against the causes which produce war, which debase the virtue of womanhood, or which promote the voluntary sterility of biologically good human stocks.

Nevertheless, if the contentions of this chapter are sound, the outlook for "great art" for several generations to come is dark.

The world could not now put noble popular art to great uses if it had it; and this fact must eternally under present conditions baffle the potential creators of the noble art which could appeal to and sway the multitudes; for it is a postulate of the theses of this paper, though belatedly stated, that socially great art is usually democratic or "popular" art. The favors of wealthy and self-glorifying patrons, over-persuaded trustees, and the few

sincere devotees of *res tempora acta* cannot evoke the cumulative approvals and strivings that finally give the world enduring examples of socially influential art.

That art must usually be simply the culmination of innumerable efforts of emulative creators, each enheartened by a crowd of applauding followers, and each perhaps conscious of meeting only the demand of the moment. That which subsequent generations have appraised as among the greatest of the art products of an art-prizing era was often at the time born in obscurity, the bearer of it as unconscious of the future repute of his creation as was the mother of Lincoln unaware of the fame that would come to her son. It was simply one of the unnumbered contributions to a public demand as massive and persistent as is to-day the demand for lifelike photography.

Art is in the doldrums to-day because those who must express themselves through æsthetic media are discontented at being restricted to lesser and subordinated missions. The artists and the most appreciative followers of art appear to think that we can and ought to restore the past. They cannot and will not believe that the current of life has carried the world into new regions where men must use and learn to pride themselves in the use of new instrumentalities. The possible ministries of art dwindle in those fields of human activity where great movements are astir and deeds of great consequence are being done. But in the groves where men recreate their energies and take the passing satisfactions of life, it still in minor forms makes its appeals and has its values.

CHAPTER IX

THE OBJECTIVES OF EDUCATION IN GRAPHIC AND PLASTIC ARTS

I. INTRODUCTORY

LITERATURE, music and dancing are "fine arts" that seem to minister most largely to what we can distinguish as the cultural phases of life. Many of us believe that they possess potential values also for the moral, civic, and religious life, but the spirit of our time seems opposed to efforts to distinguish these values and to promote their realization by appropriate media chosen from these fields.

The case of the arts of form and color is very different. The "fine arts" phases of these blend endlessly with utilitarian applications in manufacture and in home-making. But, as regards adequate interpretations of social values, the situation here also is very confused. More than half a century before the outbreak of the great war, the leading industrial nations, keenly bent on economic rivalries, found that "applied art" was likely to become a large factor in their own or their rivals' successes. France had an historic lead. Great Britain undertook large policies of social encouragement. Germany and the United States were not to be outdone. But in spite of endless discussion, and much experimentation, the situation as regards demonstrably valid programs has remained very confused down to the present.

There are those who hope for new vision and new support when the chaotic conditions consequent upon the war shall have been adjusted. We must hope for the best; but we must not cease to help nature and society.

We fervently hope that politics and international relationships will change for the better. We trust that the small nations will find more security and that democracy will find itself purged as consequences of the great struggle. And we look wistfully for more light on current economic problems, the difficulties of which the war has aggravated.

It is clear that the war greatly extended knowledge and applications of certain forms of science—chemistry and psychology most of all. There were moments when we thought its necessities were tending to establish certain bigger and better forms of coöperation than we had known before; but probably in this respect the sow of custom is already returning to her wallow.

In literature, painting, sculpture, architecture, music, art-dancing, will it be found that war has lifted or lowered us? Probably it is too soon to tell. At this moment the signs are dubious and capable of almost any interpretation.

For education the war has unquestionably done much. It has not materially clarified our specific aims, I think, and in only a few respects has it brought better methods into relief. But it has swept away the last surviving prejudices in favor of illiteracy. It has battered down the bulwarks of British obstinacy against science in the schools. It has made clear to all leaders of men the pressing need, under modern social and economic conditions, of enforced continuation, or part-time, schooling even up to seventeen or eighteen years of age. Every one is now convinced that our Russias, Mexicos, Chinas and Turkeys can be made tolerable members of the modern world only through universal education. Every well-informed person realizes that Bolshevism, anarchism, syndicalism, and all the other isms of those self-inflamed piratical crews who, because

things are not perfect on board, would scuttle the ship before they themselves have learned to build or manage rafts, are to be prevented in future only through more extended and especially more purposeful education in the schools.

The war has not so much given us new light on education as it has accelerated the operation of certain forces—some making for the destruction of long outgrown and functionless organs, some making for the construction of new mechanisms and the evoking of new spirits suited to the modern age—which had begun to operate some years before the war began. We cannot afford to forget that education is still largely in the prescientific stages of evolution. Medicine, agriculture, aviation, mining, electrical engineering, and navigation can, even in fundamental respects be transformed overnight by new discoveries. In these fields progress is now being made largely on the social plane of scientific purpose and method. To achieve such progress requires no painful breaking down of age-old customs, repeated blasting at cemented dogmas, or surgical cuttings into the warm flesh of cherished faiths.

But education, like politics, religion, and the domestic institutions, still rests largely on the prescientific foundations of faith, belief, custom, sentiment, and tradition. The underlying sciences—especially psychology and sociology—are not yet sufficiently developed to give us the keys to the complexes of aspiration, ideal, social habit, and half-knowledge which we have painfully built up for thousands of years.

Progress comes, of course, in education as it comes sooner or later in all other fields of human activity on a prescientific basis; but it comes haltingly and uncertainly.

It comes as a result only of endless discussion, of long-drawn battles between different kinds of faiths, wherein important issues are often submerged and ruined as were the fields and villages of the battlefields of France.

But the one big message which should come to education no less than to government, religion, economic production, community building, and the family in this time of transition from faith and custom foundations to foundations to be erected on the rock of science is that of *social purposiveness.* Man may never be able to answer the ultimate riddles of existence, whither? and to what purpose? but it will henceforth be a poor civilization which cannot provide reasonable answers to these riddles when restricted to affairs of this world. What are the types of society we seek to produce? What are the varieties and degrees of efficiency—in personal culture, in social righteousness, in physical well-being, in vocational competency —which we determine, in the light of best available knowledge, to be desirable and, no less important, practicable?

Hence we may expect on the part of educators increasing demands upon sociology that it exhibit in specific form the desirable and attainable objectives of all education, or of any variety of education, for society as it exists to-day or can be made to exist to-morrow or next century. With respect to any traditionally established subject of study educational sociology now asks: For what purpose is it prescribed or offered? For what group of learners? What are the results of its teaching? Does it usurp the time of better subjects? What modifications should be made in order that it may prove more genuinely functional? With respect to social needs not yet met by organized schooling, educational sociology asks: What are these needs, as developed by any particular social group? Why

do non-school agencies of education fail to meet them? What particular types of school education will probably meet them?

Because nomenclature of art education (like that of several other forms of education) is vague and equivocal, confusion can only be avoided by indicating senses in which words are herein used. "The Arts" include in the present chapter only those products embodying skill and taste conspicuously according to æsthetic principles of form, color, and shade. The useful arts, the practical arts, the liberal arts, and the fine arts of music, literature, and the like are excluded.

Hence such derived terms as "artistic," "art factors in products," "art-based vocations," "art-using industries," "artistic wares," "artistic designer," and the like are here intended to indicate, and also to be limited to, conditions where production or appreciation of the æsthetic in form, color and shade are consciously prominent, if not dominant.

The writer cannot speak on any phase of art education from the inside; his approach is essentially that of the educational sociologist who studies society and its processes as objectively as practicable, and therefrom seeks to derive tests of desirable educational aims, as well as to evaluate contemporary achievements.

It shall be the purpose of this chapter, therefore, to discuss certain problems of art education as they appear when viewed from the standpoint of educational sociology, and in the light of conditions created or modified by the war. To an increasing extent all educators must look to sociology for light as to society's needs of various types of education; and we must obviously turn to objective studies of society as it now exists to determine how far any given type of education is actually functioning.

2. PROBLEMS AHEAD

The desirable purposes and place of education in the graphic and plastic arts have been much discussed in all western countries during the last sixty years, but the discussion seems to have been rendered confused, and largely fruitless by the failure to dissociate vocational from non-vocational ends. Just now there appear good prospects of clearing up some of this confusion in America. The war seems to have taught some of us the difference between make-believe vocational education and the real article. In a few quarters at least it is being recognized that any serious school vocational education for a specified calling had better not be undertaken at all rather than be undertaken in a trifling spirit without genuine vocational motive or clear-cut vision of the goals of productive efficiency. Hence the growing conviction that schools planned to train competent workers for any one of the more than two thousand different vocations which American men and women follow, must learn to take their work very seriously and to have clearly defined objectives which shall not be set in a No Man's Land half-way to some hazy and illusive goal of vocational competency. They must carefully select their students and sternly frown upon the complacent amateurishness and fussy, admiration-craving dilettantism which are still the curse of nearly all vocational schools in America except those preparing for the well-defined professions.

Vocational education, therefore, whether for the artistic professions of painting, sculpture and architecture or for those less exalted specialties in which mastery of the methods and materials of the plastic and graphic arts is a primary essential, is, we now perceive, for the few only, and those of select talent. But non-vocational edu-

cation—the general or liberal education that elevates tastes, refines sensibilities and makes of man a superior rather than an inferior utilizer—is clearly for the multitude; and this should prove no less true as respects the graphic and plastic arts than as respects all other products of nature and of human ingenuity.

But specific problems as to the desirable scope and content of art education in all its forms are certainly going to vex us sorely for the next few years. This is largely because sociology can give us so little light on the place of the various æsthetic arts in modern life. It would seem that modern studies in sociology have done much to discover explanations, to clear up the mysteries, and even to find solutions for present-day purposes, of man's economic, domestic, militaristic, political, and even religious activities; but students have not yet appeared who can interpret and assign adequate social valuations to his æsthetic aspirations and expressions, whether in the domains of seeing, hearing, or mental imagery. We still leave to the partisans and special pleaders almost all attempts at analysis of values accruing, or desired to accrue, to modern society from old or new art, from higher appreciations of painting, sculpture, architecture, music, poetry and dancing. Naturally and inevitably these discussions are replete with mysticism, unexplained dogmas and the bias of individual predilections.

In the meantime, the democratic millions of America, following their instinctive preferences and under significant pressures of nationalistic or religious ideal, give to the photo-drama, the short story, mechanical music and printed illustration the same massive approval that in other ages the millions gave to Athenian architecture, sculpture and tragedy, to Roman temples, to thirteenth-century French decoration and to German music. These

popular demands exhibit some of the large facts of social psychology about which little is known as yet. In any given age it would seem that those contemporary art workers who have established strong intellectual connections with the historic expressions of their art are pretty contemptuous of the then prevailing popular interests. But the very magnitude of the popular demand and the tremendous rewards, in money and distinction, which it can bestow, leads to most exacting competitions in which finally creators of greatest ability are enlisted. These supreme men are then enabled to produce the enduring works which give historic fame to the period, but which not infrequently mark also the close of that kind of artistic era. Henceforth, the abiding products of this time are relegated to sophisticated taste and to historical research. Ages later efforts will be made to restore the appreciative attitudes of the multitude, but these stubbornly persist in their low-brow quest of novel, pleasure-giving socially forceful art.

Many are the general problems which appear to vex educators who seek to determine what should be the place of graphic and plastic arts in the education of to-day. We Americans are now the wealthiest people of history. We are freely spending vast sums on dwellings, buildings for business and amusement, roads, parks, cars, bridges, furniture, clothes, table ware, jewelry, moving pictures, magazine and advertising illustration, photographs, books, and bric-a-brac. If we desired we could spend lavishly for paintings, statues, and sculptured stone decorations. Following the economic trend of a power-using age, we are diminishing steadily the relative amount of handwork and increasing the amount of machine work in the making and refining of these products. Our wondrous and costly machines become more competent in multiplying " stand-

ardized parts"—whether sea-scapes, statues, spoons, rugs, or parlor tables. Sometimes it would seem that the only fields reserved to the craftsman of historic type are catering to the few wealthy who seek display, or to æsthetic longings for a few wholly decorative bits of bric-a-brac in the shape of mantel or bureau ornaments.[1]

3. AMERICA'S PLACE

In one respect, indeed, the war has clearly extended America's art heritage. We used to boast that we were to teach the world democracy. Then we found ourselves exceeding the other nations in wealth. But, until very recently, there were always nations to which we looked up in art, science, literature, music, and artistic wares. To these nations went our students, visitors and buyers. What of the future? Do we expect still to send our youth to Paris to complete their education in architecture and painting, to Germany to learn the latest in chemistry,

[1] It seems unfortunate that the words "applied arts" and "applied art" have fallen into disrepute lately. It is difficult to draw necessary distinctions without their equivalents. Harmonies of form, color and shade are more or less sought and valued by man in endless objects of artifice and nature; but the relative importance of æsthetic elements as contrasted with elements of healthfulness, durability, low cost and general serviceability vary enormously between the Parthenon and a log cabin, a ball-room gown and a workman's overalls, the Sistine Madonna and a magazine illustration, a Louis XIV cabinet and a tool chest, an oriental rug and a linoleum kitchen floor covering.

One finds occasionally in a paper on "art" the fatuous statement that the man interested in what we are here calling "the arts" is concerned with "relative values." Ideally, perhaps he should be; and, under conditions of education very different from those now prevailing, perhaps he could be; but for the present it is ridiculous that these pretensions should be made on his behalf. He is expected to be an expert in *æsthetic* values; but it is not practicable for him to be an expert in the numerous other elements which give clothing, tools, houses, furniture, vehicles and landscapes their *total values*.

Harmonies of form and color contribute to the worth of shoes, automobiles, gowns, and railway cars; but there are so

music, and medicine? Probably not. The wealth, power and prominence of America is more likely to draw hither the ablest teachers from countries that have heretofore been the Meccas of zealous learners.

Hereafter, then, we shall probably not only set our own problems but attempt to solve them as well. We shall recover from a disposition, often degenerating into silliness, to approve the foreign just because it is foreign. (No power on earth can, of course, stay the feverish footsteps of our fad followers.) Surely as a people we are destined to give greater recognition and other incentives to our leaders and creators. Can we, as part of the process of finding ourselves, and as preliminary to consideration of detailed problems, always puzzling, of art training and instruction, arrive at some reasonable general understanding of certain large problems of the place and significance of art in modern life? What are likely to be the relative

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many other and more important elements of value in these articles as to which the "artist" can know little or nothing that clearly he can achieve results only by somehow correlating his efforts with those of other experts in specific values.

We needlessly allow ourselves to perpetuate much confusion here by our careless use of such words as designer, architect, house decorator and the like. In the broad sense, justified by long usage, each of these blanket terms covers many types of workers, some of whom require to be trained in æsthetic valuations and some do not. A locomotive or a raincoat requires a designer or designers as much as a parlor table or a lady's summer hat; but upon the first type of product few demands for æsthetic qualities are laid, while many such demands are made on the second. We need some such qualifying terms as artistic designer, hygienic designer, structural designer, service designer, etc. Quite probably in designing a bridge across North River several kinds of designers should be forced to work in coöperation. Certainly the expert in structural design (the engineer), or the expert designer for effectiveness of traffic, or the expert in æsthetic values, if given the job alone may be expected to make a sorry mess of it. No one man under present-day conditions can be an expert in each of the half-dozen categories of values that enter into the making of cotton dressgoods, parks, school houses, children's rompers, railway passenger coaches, or brick buildings.

potencies in producing "social results" in the future, of art (through its "æsthetic" appeals) and of science (through its "knowledge" appeals)? What is the significance, sociologically, of "popular" or "democratic" art? What are to be the effects, in terms of genuine social values, of increased use of power-driven machinery in the production of all sorts of artistic staples?

Now I submit that sociologist and artist have nowhere come together on these problems and until they do the present confusion of tongues and counsels will prevail. In fact, among artists themselves the pragmatists and the idealists are arrayed in almost perpetual conflicts ("art for man's sake" vs. "art for art's sake").

The age-long battle between Epicurean and Stoic is still being fought every day, not only among producers, but, perhaps more significant, among users of music, literature, dancing, and the plastic arts. Are we to provide art chiefly to give pleasure? Are we to try, laboriously, to educate the young to higher standards of appreciation, primarily that they may get keener, more massive, or more enduring pleasures therefrom? Is pleasure (or happiness) to be regarded as a *summum bonun* of life, or as a valuable stimulating means to be put aside as soon as it has helped us achieve more important and worthy ends? Historically there can be no question that all the fine arts have played great rôles in helping mankind, or some ascending portion thereof, up the rocky heights of progress. What of the future? In no critical spirit, but with strong desire to have some of the involved questions carefully studied, the foregoing chapter has analyzed a number of the specific aspects under which this general problem may be considered.

How shall we interpret "popular art"? Teachers aiming to improve taste in music, literature, drama, paint-

ing and sculpture often seem to fail to realize that the popular appetite for these things is omnipresent and insistent, teachers or no teachers. The schools have needed to do nothing to popularize the short story, the modern novel, the cheap play, the photo-drama, mechanical music, or magazine illustration. One wonders to what extent the efforts of "superior" teachers to deprecate and frown upon the vulgar tastes which run after these things, may not, after all, be like the well-meant efforts of Mrs. Partington to sweep back the rising tides? Perhaps the tides are going to rise just so high in spite of all our efforts, and perhaps no less certainly, also they are destined to come to rest before swamping our homes and our lives.

We need the help of the social sociologist in this matter of popular art. Community appreciation of folk-song and folk-dancing was once, apparently, as diffused, spontaneous and intense as is now appreciation of the photo-drama; can those vanished popular interests be restored? It may be, as suggested above, that every period, renowned for its great producers in special fields of art, was simply the zenith period of a much longer period of pervasive and truly "popular" interest in that art. If so, is it well that art teachers of to-day should so constantly bend their looks backward? At least from the standpoint of twentieth-century America there is something that at times seems disgustingly futile, and at others very pathetic, in our endless attempts to bring back vanished voices, to infuse vitality into the mummified remains of past cultures. Doubtless giants lived in those days; and perhaps the faiths of the new generations must still be built on foundations of ancestor worship, that the continuity of tradition be not lost or the richness of the social inheritance be not undervalued. But in the dynamic age, and especially when new continents are to be explored and set-

tled there is such a thing as trying to preserve in daily use endless heirlooms that had better be recently stored in attic or museum, that they may not cumber the feet of rising generations. The least we can do is to release our thinkers to the extent that will enable them to study and evaluate the spontaneous arts that spring unbidden from the fertile soil of popular aspirations.

4. ECONOMIC APPLICATIONS

If the " artist " has not found solid ground for his feet in appraising either the place of art in modern life or the significance of popular demands, it is also no less true that he still refuses to face the facts of contemporary economic production. It may be one of the symptoms of the waning powers of art (of historic types) that the artist still so often clings, in ideal and thought, to production wherein tools mediate only to the least possible extent in the processes whereby the hand of man shapes raw materials into goods to satisfy human needs. Few present-day writers upon art have anything but words of detestation or dismay for production through power-driven machinery. They refuse to think of the possible social values of multiplying populations, rising standards of living, and the freeing of men from drudgery through use of the harnessed inanimate forces of nature. " Automatic processes," " standardized parts," " quantity production "—the formulæ of those producers whose aims are to minister to the growing needs of humanity while at the same time diminishing the labor cost of wares—are words anathema to the artist. He is far from home in this modern world, but it is certain that if he cannot accommodate himself to our life he shall find occupation and livelihood only by playing along the side alleys of civilization and coming to entertain us in the evening hours when, the

burdens of the day laid aside, we seek recreation or diversion.

These, then, are among the fundamental problems of the relation of art to modern life to which we must find solutions before our proposals for art education in the schools can be grounded on the rock. In the meantime, of course, we shall, as we ought, go on studying our educational problems by methods necessarily empirical, and perhaps very personally empirical at that.

In one respect, indeed, as suggested above, it would seem that we have recently made substantial advances towards sounder conceptions of art education. We have learned to think and speak of "capacities for appreciation" as something very different from "powers of execution," and to recognize that these capacities can be systematically developed and trained towards predetermined ends. To a man interpreting educational aims in terms of sociological conditions and requirements this seems immeasurably important.

For it is clear to the student of social life that modern conditions tend steadily to specialize, particularize, and localize production, whereas they no less certainly tend to universalize and democratize consumption or utilization.

A half dozen engineers and (we hope) artists in Detroit may design a "T model" automobile of which millions will be sold in all parts of the world. A clever poster advertising cigarettes will be circulated to the extent of ten million copies in all countries. A choice design of Colonial spoon will be manufactured in countless numbers over scores of years. A genius working in Paris originates a novel and attractive design suited to calicoes; within three years, a trifle "sophisticated" perhaps, that design will be found on scores of millions of yards of cloth sold in every market in the world.

All our people are now being incessantly educated in standards of utilization—æsthetic, no less than hygienic, economic and utilitarian. But with this education the schools have at present little to do. It is carried on in an unorganized fashion wherever two women meet to criticize the clothes of a third, wherever a salesman tries to "sell" a buyer, wherever a board of directors is being urged to a larger campaign of advertising, and wherever men are rivaling each other in "conspicuous consumption."

Companions and salesmen are, of course, educating the average young man to-day as to choice of neckties and socks a hundredfold more than does any school. The same is true in the case of girls' hats, the housewife's parlor furniture, the business man's automobiles, the newspaperman's typography, and the farmer's hedgerows. Much of this education is bad rather than good; it is excessively governed by the dictates of that mystic force called fashion; and the conscious exploitations of commerce play no small part in its operations.

Here, then, we are beginning to recognize, lie large opportunities for the schools. They can, with unselfish purpose, educate "tastes" or "appreciation." They can lead our youth to prefer those things which, among their other values, include suitable or good harmonies of form, color, and shade. By making our people seek, demand, and patronize the better rather than the worse, they can concentrate the effects of their desires on producers and soon compel these to discover the means—including more competent service in æsthetic designing—of meeting public demand.

Now, I suspect from some things I hear and read that our art teachers, not to be outdone by teachers in other fields, are determined to try all possible wrong methods of achieving the objectives of appreciation before they settle

on the right method. All forms of school education in practice, unlike those outside the school, seem bent on accepting at first as their primary principles of method such products of topsy-turveydom as: "from the abstract to the concrete," "from the general to the particular," "from the unknown to the known," "from the remote to the near," "from the complex to the simple," "from the incomprehensible to the comprehensible."

5. ART APPRECIATION

It is reported that some of the artists are trying to teach appreciation of plastic art by seeking to give the child early understanding of certain "principles" of harmony of color, shade, and form, such as rhythm, balance, and the rest. Are they trying to lay the foundations for right appreciation of tableware, furniture, hats, cottages and book-bindings via the media of paper, pencil and brush? Judging by pedagogic experience in other fields, I doubt if in that way much will be accomplished. A few gifted children may get the real gleam. These would have been pretty sure to get it anyway. And a few others will become little æsthetic prigs; but I suspect the large majority will remain unaffected.

So far as the rank and file of us consumers are concerned, it is pedagogically probable that there is only one way of educating us economically and effectively to be good "choosers" or "users" of wall-paper and that is to bring us enough times into situations where we see, contrast, and analyze various kinds of wall-paper—hideous, bad, fair, good, admirable—in actual use. Let the experience of the wise ones impinge on the inexperienced or spoiled taste of learners a few times in these situations, and I predict that far better results will follow than from

all the brush and pencil work we can crowd into eight years in school.

If we want to develop good taste in tableware among fourteen-year-olds, let us provide moving exhibits—of the good and bad, the enduring and the ephemeral, side by side; let us get pupils to observe, to question their first impulsive preferences, to reconsider hasty first judgments, to hear the criticisms of authority; let us on occasions somewhat removed from each other give pupils exercise in arranging a hundred spoons in order of excellence according to æsthetic standards previously discussed and illustrated. It seems certain that these procedures will beget right appreciations speedily and surely.

Desirable, but impracticable, some may retort. We cannot tell until we shall have made and tried plans. Certain it is that our children are surrounded, even beset, in their daily lives with clothes, furniture, shoes, tableware, automobiles, houses, wall-papers, book-bindings, jewelry. Are all these materials inaccessible, unusable? The chief difficulties are pedagogical rather than administrative, very probably.

Turning from the side of appreciation to that of execution it is not apparent that the situation has noticeably improved in recent years. There are, of course, two distinct divisions in this field of execution—first that involving the teaching of drawing or other graphic or plastic art as an auxiliary tool of expression or use; and, second, that involving the training of specialists, such as painters, sculptors, artistic designers, artistic craftsmen, artistic decorators, etc.

We hear less now than we did a few years ago about the desirability of teaching all or many people to draw, to use color, and the like for the reason that these are needed in so many walks of life. Most of the old arguments for

the universal teaching of drawing (as a means of expression or for use in vocation) were based on a very superficial and uncriticized knowledge of modern production. The large mass of it was, indeed, assumption based on no sociological knowledge whatever.

We know now that in few vocations is there considerable need of ability to draw; and that when it is required it can best be given in special vocational schools for these vocations. The large majority of vocations make no perceptible demand for draftsmanship, or even for ability to read drawings.

Furthermore, it would appear that drawing as a means of expression is akin to a foreign language; if it is to be used at all effectively (among adults) it must be very well learned—in fact, so well learned that only by a long and painful outlay of time and energy, as in the case of a foreign language, can results be obtained that are at all worth while.

6. CONCLUSIONS

1. If public education in and for "the arts" is to achieve its best results for American society during the next half century, then it is of the utmost importance that we should seek fuller knowledge and agreement than we yet possess of the relationship of the various manifestations of art to modern life as it is or should become under conscious effort.

2. Of no less importance to educational planning is the development of an accurate nomenclature of art education. A loose, indeterminate, equivocal nomenclature in any field of modern enterprise is to be regarded as indicative of primitive development or else of incoherence of underlying theory. In either case improvement is called for.

3. In all the grades up to the time pupils are sixteen years of age our schools should offer for election (to the extent that facilities permit) short unit courses on the basis of amateur execution—the high-grade play basis—in the graphic and plastic arts, pure and applied. Such units can be developed in free-hand drawing, decorative textile making, instrumental drawing, simple pottery, modeling, ornamental metal work, wood carving, stenciling, leather work, text illustration, picture copying, photography, decorative dressing, readings in art history, etc. These courses should be organized by persons who are not educational systematists or drill masters, but who believe in giving free scope, in this department of education, to the amateur creative, initiative, or constructive instincts of children. Important contributions, either to the vocational powers or to the capacities for appreciation required among adults in civilized life, need hardly be expected from these courses. Vocational and appreciational by-products there will be at times; but these should constitute incidental and secondary, rather than primary, objectives.

4. Beginning somewhere in the upper grades—perhaps when children are about twelve years of age—elective short unit courses in appreciation of art factors in objects of daily use or association should be offered. Such unit courses—for perhaps ten to thirty hours in length—might well be offered on such subjects as: study of pictures; good taste in women's and girls' clothing; art factors in neighborhood architecture; garden art; art factors in home furnishings; art in tableware and table service; art elements in book-bindings and typography.

These courses should center in the coöperative study of objective realities made available either by fixed exhibits to be visited, or traveling exhibits to be circulated among schools. Certain units in the same field—*e.g.*,

dress, housefurnishings, architecture—might be offered at successive intervals to the same pupils as they mature—for example, first at twelve, again at fifteen, and again at eighteen—on more advanced levels. Comprehension of abstract principles of æsthetics should be sought only as a secondary product of these courses.

It is doubtful if we should expect much in the way of development of genuine capacities for art appreciation except as we bring the learner into intimate contact with the objects embodying art forms of the right kind. In other words, we should view doubtfully attempts to teach appreciations of architecture, tableware, or dresses through the media of pencil, brush, paper, or even modeling material.

We should not approve that practice often still found in supposedly vocational schools, of trying to teach pupils of average general powers or of average artistic powers, the *principles* (always remote and abstract) of art, as a related subject. We should insist that very early exercises, problems and projects be developed whereon the learner can study and practice *applications* of art in the particular forms required in the vocation for which he is being trained. From the concrete to the abstract, not the reverse; from the particular to the general, not the reverse; from the known to the unknown, not the reverse; these must be pedagogical guiding principles.

Amateur craftsmanship in occupations presenting much or little in the way of artistic possibilities—ranging from wireless, potato growing, and bread making, to printing, photography and jewelry making—should be encouraged in our schools, but *not* for vocational reasons and in many cases probably not primarily for ends of appreciation.

5. We should cease to defend the teaching of either

general free-hand or general instrumental drawing design as a *vocational* subject. The probable vocational functioning of these subjects as now taught or as they can be taught in schools of general education is very doubtful. Hence the teaching of any form of drawing or design for vocational purposes should be confined to the vocational school devoted to education for a clearly recognized vocation, the demands of which for any particular art powers are known and evaluated.

For children of manifest talent and so situated as likely to become aspirants for vocational training towards the art-based vocations there should be available, from the age of twelve on, invitation courses in drawing, painting, modeling, and handicraft, as prevocational to fields of vocational study later to be undertaken in special vocational schools for the art-based vocations. Not numbers, but talent, selected as are candidates for art school scholarships abroad, should be sought for these courses.

6. A substantial number of vocations use drawing or other forms of art in a minor capacity or related technical function. Examples are carpentry, dressmaking, printing, elementary-school teaching (it can be assumed that the teaching of specialized related art must usually be offered by special or departmental teachers), certain forms of salesmanship, and tinsmithing. But owing to the specialized character of the art utilized in each of these and the fact that 90 per cent. of all workers use or can use no drawing or other art in their vocations, it is obvious that the teaching of specialized related art must usually be confined to the vocational schools where major skills and technical knowledge are acquired.

7. Vocational schools, professional or lower, maintained to train workers for the art-based vocations—that is, callings such as those of textile designer, adver-

tising illustrator, teacher of art appreciation, interior decorator, decorative sculptor, etc., in which knowledge and ability to apply in special ways and in accordance with exacting standards principles of graphic and plastic arts constitute major requirements—must so develop and extend their work that they shall become complete vocational schools instead of the truncated kind now commonly found. That is, they must learn the requirements of the vocations for which they train; they must cease to turn students out half-equipped for these vocations, trusting them to round out their training under the hit-and-miss conditions of apprenticeship; and they must connect with commercial establishments so that the last one or two years of the student's course shall be spent on some part-time basis of participation in practical productive work under the supervision of the school as shall insure real testing and, ultimately, genuine competency. At present too many of our public schools of art or design or craftsmanship turn out a multitude of quarter-finished or half-finished aspirants for employment in art-using industries. Too many of these, especially of the fair sex, have never had any real vocational motives at all. They are headed into waters of commercial competition, ignorant of their own limitations, to sink, swim or marry, but of their ultimate fate the art school knows little, and except for the few shining stars, seems to care less.

We must refuse to allow our so-called art schools—private as well as public—longer to deceive the public by teaching only parts, and sometimes doubtful parts, of supposed art-based vocations. We should insist on such surveys of these vocations as will clearly show what may, in any given case, be expected of apprenticeship, of unsupervised "learning on the job"; and what we find that apprenticeship or the work itself cannot contribute

effectively and economically, to vocational competency, we must insist the schools shall contribute even if they have to double the length of their courses, reduce the numbers of their students and replace some of their present faculty members by men and women proficient, in a productive sense, in the applied fields.

8. In so far as artists and educators advise the public as to desirable future developments, let us not take the unethical position that we *always* ought to meet and crush foreign competition in our own markets, nor yet take the silly position that it is always profitable to do so. There are too many people now urging us incessantly to lift ourselves by our economic bootstraps, to eat our own cake and keep it, too. In the long run the country that does not import cannot export. In the long run crowded peoples working with limited resources are going to do finer, more artistic and more scientific work in several respects than less crowded peoples, less harried by economic limitation. Our literature of educational propaganda is now too full of proposals that we, like Mrs. Partington, sweep back the economic tides with our little academic brooms.

9. For many purposes we greatly need surveys of the wares which men to-day produce and consume, such surveys to involve some kind of comparative weighting of the various factors which give them value in satisfying human wants. For example, if we analyze the factors which give us a resultant "general suitability" in clothing we shall find them to include factors of hygiene, durability, adaptation to working needs, and "looks." In practice we expect the "looks" or æsthetic factor to bulk large in a girl's ballroom dress, and small in a house-working dress. So in all other products. We expect to pay a substantial quota for the æsthetic factors in sleeping-cars, parlor

furniture, family silverware, permanent residences, hotels, parks, cherished books, and sporting rifles. But we expect little of the æsthetic in freight-cars, kitchen chairs, army eating utensils, temporary houses, barns, hayfields, newspapers, or army rifles. In expressing demands for more "artistic" production what attention should we give to æsthetic factors in, respectively: children's shoes and women's outing hats; pleasure automobiles and auto trucks; men's shoes and men's pipes; the typography of a morning newspaper and that of a set of Shakespere; a summer cottage and a village warehouse; a watch and a bracelet; a parlor lamp and a kitchen gas stove? From this analysis we need to proceed to a classification of the industries according to the degrees of which they could or should use artistic designing. Are the contributions of artistic specialists needed in the production of: pleasure automobiles; woolen goods for men's suits; men's collars; business-office furniture; horseshoes; school desks; bricks; wall-papers; railway freight-cars; firearms; carpenters' tools; kitchen utensils; containers for packed fruits and meats, etc.? Some such survey as the one indicated would greatly aid in the development of programs for vocational schools intended to train designers.

CHAPTER X

THE OBJECTIVES OF HISTORY AS A SOCIAL SCIENCE STUDY

FROM the standpoint of educational sociology the study of history occupies a very peculiar place. Certain studies of history have, like Latin and mathematics, long taken definite traditional forms. No one doubts that certain studies in history, as well as a variety of the materials from history, will prove essential to a realization of many of the specific objectives of social education, once these shall have been defined.

But beyond this all is opinion. The historians and the social scientists are far from agreed as to what purposes *should* be served, as well as what *can* be served by the historical studies at particular levels of school education. It is here intended first to discuss certain problems that naturally arise from the application to the teaching of history in our secondary schools of the tests suggested by Mr. Abraham Flexner in his pamphlet, "A Modern School."

"Let us restate our guiding thesis; modern education (as it should be) will include nothing simply because tradition recommends it or because its inutility has not been conclusively established. It proceeds in precisely the opposite way; it includes nothing for which an affirmative case can not now be made out."

It is designed in the second place to discuss certain possibilities of adaptation and readjustment in organization and presentation of the social sciences, including history, as means or instruments in secondary education, which might render them capable of meeting the standards set up by Mr. Flexner.

I. WHAT IS SCHOOL HISTORY?

But just what is this secondary-school history which we are to examine? What is being taught, and, so far as we can ascertain them, what are the objectives controlling in its teaching?

In the field of history teaching, as in other fields (*e.g.*, science, literature, English language, art) we must expect to find substantial gaps between ideals and realizations. There have been general committees whose objects have been to define in elaborate detail what could or should be taught as history (and related) subjects in our schools. (Like similar committees in other fields they have usually: (*a*) carefully avoided telling us, except in vague and elusive phrase, just why the subject should be taught at all; and sometimes (*b*) proceeded in their work on the basis of an apparently tacit assumption that their subject was one of very serious import in education and that therefore they were warranted in claiming, without argument, the lion's share almost of school time for it.) These commissions, as well as the numerous individual educators and scholars who have set forth suggestions and recommendations for the improvement of history teaching have been, of course, in large part, building for the future. But it is very hard—it seems to me now impossible—to determine just what are the *common* elements in their generalized principles and programs. Is there substantial agreement as to any considerable element in their proposals? It does not appear so even if for no other reason than that the new crop of competing text-books seems to exhibit no evidence to that effect.

But there is evidence in considerable quantity as to what are the standards of aim and accomplishment actually imposed on, or accepted by, the rank and file of his-

tory teachers to-day. This evidence is abundantly exhibited in the text-books that find favor among history teachers, and in the examinations imposed by external agencies whose standards must have a majority approval (as against any competing standards equally well defined) in order to be acceptable. (Of course, one assumes perennial dissatisfaction on the part of individuals with these standards, as we assume customary dissatisfaction with the weather—but it is to possible concerted proposals, to coöperatively supported programs for changes, that reference is here made.)

If now we turn to the texts in current use, and very literally adhered to by the large majority of history teachers, we find certain characteristics of organization substantially common to all—and these, it must be assumed, constitute the heart or core of history as a school subject approved by history teachers to-day. We note the comprehensiveness of treatment; the dominance of the chronological order of presentation; the great inclusiveness of detail; the consequent condensation of description and explanation; the absence of any suggestion (as a rule) of cross reference to contemporary conditions or events that might prove illuminating, or interpretive of the historical situation under consideration or that might exhibit some possible contemporary applications of that which is being studied; and the uniform implicit expectations that "mastery" of the subject will consist chiefly in the kind of memorization that results in ability verbally to reproduce faithful "copies" of statements given in the books.

Let us see how far this conclusion is confirmed by the tests imposed by that most highly organized and best conducted examining body in America, the College Entrance Examination Board. (One question is taken from each division of the questions for June, 1916, insuring

random selection by taking number 1 from the first division, number 2 from the second, etc., thus giving ten questions out of a total of 112.)

1. What were the relations of the Hebrews with the Assyrians and with the Babylonians? What are the prohibitions enumerated in the Ten Commandments?
2. Who were the leaders of First and Third Crusades? What was the result of the First Crusade? What were the general effects of the crusades on Europe?
3. Write on two of the following persons: John Wyclif, Thomas Wentworth, John Milton, John Wesley, Robert Clive, Florence Nightingale.
4. Explain the slow growth of the Dutch colony, New Netherlands, and describe the effort made to increase the population.
5. Was Athens in the right in opposing Philip of Macedon? Give reasons for your answer.
6. Explain the historical connection and allusions of the following passage:

"The Pope now rose, as the reading of the Gospel ended, advanced to where Charles—who had exchanged his simple Frankish dress for the sandals and chlamys of a Roman patrician—knelt in prayer by the high altar, and as in the sight of all he placed upon the brow of the barbarian chieftain the diadem of the Cæsars, then bent in obeisance before him, the church rang to the shout of the multitude, again free, again the lords and center of the world. * * *"

7. What was the policy of the Jacobin party during the French Revolution? Were its members high-minded patriots or bloodthirsty ruffians? Give reasons for your answer.
8. Show how the industrial revolution in England influenced English politics during the nineteenth century.
9. How did the national banking system established during the Civil War differ from the National Bank incorporated in 1791?
10. What influences that affected Roman life operated to make Cicero a different kind of man from Cato the Elder?

Now it is submitted that the foregoing sample questions do indicate quite clearly what are the actual concrete objectives controlling in history teaching to-day. Those objectives consist almost wholly and exclusively of the memorization of highly concentrated verbal statements of historical facts and generalizations of almost encyclopædic extent and variety. There is no suggestion as to the actual functioning of this concentrated verbal

knowledge in the culture and social capacities actually required of the citizen living and coöperating in a twentieth-century democracy. Nor is there any considerable suggestion of quest on the part of the examiners after information as to the student's mastery of methods of finding historical information in the future.

What, after all, are the purposes of the kinds of mastery of history demonstrated by ability successfully to "pass" examinations such as these? Are the conceptions of educational values here implicit merely traditional in the sense that the term is used by Mr. Flexner or do they in some measure rest on a basis of ascertained facts as to social values?

There have been educators who held it of importance that children should "swallow" the dictionary—should so memorize all the words and definitions that recourse thereafter to the printed page for spellings and meanings would be unnecessary. Other educational Utopians have similarly proposed complete mental assimiliation of the information contained in encyclopædias. Without doubt, the capacity of some minds for verbal cold storage are marvelous—as witness those prodigies who have memorized the Old and New Testaments.

But these feats and aspirations no more belong to the theory of general education than do high pole vaults belong to the sane discussion of rational physical upbuilding. Nevertheless, there is something of this Utopianism in the claims to-day set forth by the proponents of history study in our schools. At least their texts and examinations show that they are seeking mental cold storage of many thousands of facts on a scale little commensurate, one must think, with the needs of real education. Again, we ask, to what ends is this knowledge to be accumulated? What is it all for? Let us get somewhat back of the old catch

phrase, "every intelligent man should (or must) know this."

But, before coming to a consideration of what we might make of the social sciences, we must tarry to consider in the field of history the disconcerting effects of the teacher who is a genius—who is, one is tempted to say, a miracle worker, for truly there are those among them who can cajole living waters from stones as hard and dry as those wrought upon by Moses.

2. THE ILLUSIONS DUE TO THE EXCEPTIONAL TEACHER

It is one of the purposes of sound educational administration (using that term in its broadest sense), once the desirable and feasible objectives of education are determined and defined, to effect such a development and adjustment of pedagogical means and methods that the realization of these objectives can be achieved with an optimum effectiveness and economy (of time and money and learner's energy).

But here many educators are led astray owing to the effectiveness of the teacher who is exceptionally successful by virtue of certain special native endowments—the "born genius," so called. As regards every field of human endeavor—trapping, leading armies, gardening, mothering babies, writing poetry, janitorship, frying "Maryland chicken," and teaching, it is always possible to say of certain types of capacity, "It is born, not made." But for every field in which much work must be done, it is wholly impracticable to wait for the few geniuses. We may, indeed, insist that no one shall write poetry for us except "born" poets, because the products of the genuine artist among poets are capable of almost endless multiplication. But we cannot all wait to have our cooking, gardening, preaching and teaching done by the geniuses in these call-

ings; there is so much to be done that we must entrust most of our tasks to those who constitute the "modal" groups as respects inherited qualifications for any one of these special fields. Hence, when it is sometimes said, ponderously and importantly, relative to a specific educational field, that "everything depends upon the personality of the teacher," or "teachers of history are born, not made," it is safe to conclude that the speaker is uttering nonsense. The work of the world in most lines cannot wait on the appearance of the genius, hence programs for that work must be based upon the accomplishments possible to the modal groups of those likely to be available for that service, taking account, first, of native capacities, and, second, of adaptation and training.

This is not a digression from the principal theme of this chapter. Warning against the illusions arising from the presence among history teachers, from time to time, of the "born" teacher is an essential part of the discussion. Witnessing the ability of this genius to make any field of history study and teaching interesting, even fascinating, to classes of average pupils, we are tempted to say to all history teachers, "Go thou and do likewise." One is reminded of the story of the great Shakespearean actor who, undertaking to combine rebuke and example to a pitifully weak player of a minor part, by himself reciting the super's lines in a full, splendid voice, was met by the piping reply, "If I could say it that way, do you think I would be playing here for twenty shillings a a week?"

There are teachers—and among them history teachers —who can make the most abstract and alien subjects alluring to children. Even bitter portions of intellectual food or doses of spiritual medicine may, in the emulsions produced by the magnetic personality of an enthusiastic

teacher, become very palatable, even much to be desired, as are modern sophistications by the chemist of cod liver and castor oils. One has in mind those rare teachers of ancient history, for example—a field remote indeed from the apperceptive bases of knowledge and interests of fifteen-year-old boys and girls—who can take the rock-like formations of text-books and extract from them scintillating metals. These teachers have, usually, marked powers of reaching instinctively the buried interests, appreciations and curiosities of their pupils. They have an almost magical capacity of making the past live in the present. One sometimes thinks that if all their conversation were only nonsense syllables, it would nevertheless hold their little disciples spellbound, so warm and winning are their voices and faces, so hypnotically contagious their enthusiasms.

But to assume that teachers in general can do what these exceptionally gifted teachers are able easily to do would be as reasonable as to assume that any farm boy can become a Lincoln, any artisan's son an Edison, or any one of us a Whitman, Whistler or Forbes-Robertson. It is not only unfair, but also very poor educational administration, to assume that because some teachers have been visited by a fairy giver of gifts and can therefore extract sunbeams from the Gallic War, from quadratic equations with two or more unknown quantities, from the clashes of Guelphs and Ghibellines or from the De Coverley Papers, other teachers in general ought to be able to interest pupils in these subjects, and convince them that serious lacunæ will always exist in their culture if they do not enter enthusiastically into these barren fields.

In history no less than in physics, mathematics, English literature, Greek drama and mechanical drawing, there are areas that present great difficulties to the minds of

well-informed adults, and which may prove not only very difficult, but exceedingly repellent to the fresher curiosity and more pragmatic learning interests of youths. Under compulsion, of course, children will painfully acquire a verbal grasp of the compressed descriptions of the social transitions, dynastic confusions, sanguinary episodes and economic complications that occupy so large a part of the texts which endeavor to present all that is significant and important in the years elapsing between dates hundreds, perhaps thousands, of years apart.

But from the field of history no less than from other fields of organized knowledge, appreciation and achievement, it is practicable to derive endless materials suited to the purposes of education and adapted to the learning capacities, natural or constrained, of groups of children of all ages and conditions. It has long been accepted that for workers belonging to modal groups in any field, there is to be discovered an optimum "speeding up," an optimum length of working day, an optimum amount of supervision whereunder to produce best results. Similarly, having in view teachers belonging to modal groups as regards native capacity and acquired powers, there are to be found optimum conditions as regards the organization and presentation of subject matter for purposes of a maximum result in education. The methods of the geniuses, the rare teachers, may prove suggestive in determining these optimum conditions. These methods should be studied—and the geniuses should be gathered into conference, where practicable, so that the common elements in their successful methods can be found. But when all this has been done, methods adapted to teachers of good average ability will still have to be devised and tested.

3. THE SOCIAL SCIENCES IN SECONDARY EDUCATION

Obviously there are strong possibilities of fundamental revisions of our social-science teaching of youths from twelve to sixteen within the next few years. It is certain that, in very considerable measure, the present teachers of history and related subjects will lead in that work of revision and will equip themselves to do the new work that society will demand in social-science teaching. Even now it is, therefore, proper and profitable sanely to criticize and evaluate our present standards and practices, and to set forth proposals looking to making better use of the resources which are placed at our disposal to make education more effective. First, can we agree upon the following general considerations?

1. While it cannot be successfully disputed that the objectives or demonstrably valuable purposes of history instruction, or any particular division or field thereof, are as yet very obscure and confused, it should be recognized that the same statement will hold almost equally true of the other established traditional "subjects" of secondary education. In the main, their supposed importance as means of education rest on considerations developed largely in the days of educational faith.

2. To question the importance or value of history (or any particular area or type of organization thereof) as a means or instrument of secondary education for all, or for some classes, is certainly not to question the importance or attractiveness of the recording, interpretation or study of history by others than secondary school students, or even, under some circumstances, when more pressing educational needs have been met, by some interested secondary-school students themselves. But school education, and especially that supported by public funds,

must in the last analysis be determined as to its character, range and application, by practical considerations, derived primarily from understanding of the urgent needs of society for right personal and social competence, culture and disposition in its members.

3. It is assumed here that history can be included as one of the forms in which organized and tested knowledge of social activities, past, present and future, can be presented—as one of the social sciences. It is recognized, of course, that history, being concerned with events or individualized social occurrences, must in its purposes and its use of scientific methods differ very greatly from other social sciences where the quest for laws, principles, generalizations, and the means of social control to be derived therefrom, are primary considerations. By consequence, the criteria of scientific method in history, of the materials it should most fully employ, and of its serviceability to man must differ greatly from the criteria which are appropriate to the other social sciences—which are taken here to include sociology, economics, civics, anthropology, ethnology, social ethics, etc.

4. That the supplanting of faith objectives by objectives based upon ascertained facts as to learning capacities of individuals and those requirements of society which can be met by education of the young, will rapidly proceed in the near future, can scarcely be doubted. The definite study, and comparative evaluation, of objectives and methods in the various departments of primary education is now proceeding apace. The recent rapid development of public interest in, and support of, secondary education, coupled with widely prevalent skepticism as to the comparative values of the means and methods now generally employed in secondary schools, brings American education to the point where the " hold-backs " must yield

and the progressives find encouragement, at least so far as the prosecution of systematic inquiries regarding educationally most valid ways and means is concerned.

4. A POSSIBLE METHOD OF DETERMINING THE OBJECTIVES OF SOCIAL EDUCATION

In the ages of educational faith, which are now drawing to a close, it has been the case that in most instances the character of any particular organization of subject matter determined the educational objectives that should, or even could, be realized through it. Henceforth, as must be obvious to any careful student of current educational theory, the demonstrated needs of society and of individuals must determine these objectives. The study of history, for example, can no longer be regarded as an end in itself, but must be taken and used as a means—as a means to the realization of ends, yet obscure, it is true, but nevertheless capable of being appreciated with constantly increasing certitude, defined with greater exactness, and evaluated with greater precision.

What are some of these ends or objectives? It is suggested that the following might prove to be a profitable method of resolving at least some of them out of the chaos of individual and social psychology in which they are now buried.

Let us take at random one hundred men of from thirty to forty years of age. Let us rank these hundred men in a series from lowest to highest according to the consensus of opinion of several competent judges directed to base their decisions on the extent to which each individual of the hundred is a cultivated man and a good citizen, using, as far as practicable, what the world holds as approved qualities of these descriptions. Having our one hundred men ranked in order, let us call the twenty

highest, *A* grade men, the next thirty, *B* grade men, the next thirty, *C* grade men, and the lowest twenty, *D* grade men.

The *B* grade men, obviously, are all above the average, as judged by the standards set up, but they are not exceptional. Let us now ascertain what these *B* grade men possess, exhibit, or express in action, of cultural qualities, on the one hand, and of civic qualities, on the other (the words *cultural* and *civic* being each taken in somewhat restricted and mutually exclusive senses) that can in any way be connected with education in the social sciences, whether obtained in, or out of, schools. Let us find what is common in the knowledge or appreciation they now possess. What portions of this knowledge or appreciation are still vitally significant, and what are in a true sense simply intellectual junk? Furthermore, of what deficiencies are these men conscious, and what are the probable important deficiencies in their cultural and civic equipment of which they are unconscious, but which would be revealed by critical study of their social fitness and personal development?

For example, all of these men know something about the history of the United States prior to 1790—little or much. What are the elements in the knowledge common to many of them? What are the common cultural interests and attitudes possessed by them which are to be ascribed to that knowledge? To what extent and in what ways are their various forms of civic behavior and moral conduct based upon their knowledge and appreciation of the events that took place in the history of their country prior to 1790? Again, to what extent are these *B* grade men conscious that they have an unsatisfactory equipment of knowledge and appreciation of the history of this period? Or, using external approaches now, to what

extent could it be shown that their lives are essentially incomplete and unsatisfactory to themselves and to the society of which they are members because of deficiencies of their education as respects the period under consideration?

The method here suggested, however obscure and uncertain it may now appear, is one that will probably be more and more used as a substitute for our present reliance upon dogmas, *a priori* guesses, and aspirations as regards the field of social-science instruction. Let us take one other illustration:

It will readily be admitted that emigration and immigration or the migration of peoples, as it affects the United States, is a subject that ought to appeal to the intellectual and even æsthetic imagination of many. Furthermore, it must be obvious that the effectiveness of any man's behavior as a citizen of this country during the next generation will depend in important measure upon his general and specific attitude towards, and his correct and detailed understanding of, the numerous problems involved in the migration of peoples.

Again, we find that all our *B* grade citizens know something about migrations, although, as a critic would sarcastically observe, they probably know many things that are not so. They all have what might be called cultural interests in the subject. When the time comes to influence social behavior as regards migration and those who do or do not migrate, all these *B* grade men contribute their share of feeling, knowledge and action to the discussion, formulation and execution of policies and the performance of innumerable concrete social acts.

Whence, then, have our thirty *B* grade men derived their present appreciations and knowledge of questions of migration? Of what deficiencies are they conscious? Of what deficiencies in them are we, looking on from outside,

and with presumably sharpened social insight, aware? What inferences could we make as to what the schools of to-day should do for the next generation?

Suppose, now, that a fairly complete social survey of the character here illustrated could be made, to cover all our classes of adults; would it probably prove possible for us, on that basis, to determine a series of educational objectives that could best be realized through school instruction and training in the social sciences, especially adapted to the educational requirements (as determined in part by the needs of society) and learning capacities of youths from twelve to eighteen, taking account of our possibilities of using that material both for cultural and for civic purposes—it being assumed that these purposes are certainly not congruent, though perhaps in some measure overlapping?

Following such procedure, we should be able to define a very acceptable scheme of objectives, so definite that they would readily suggest the means and methods by which they could be realized. At the same time, we should find means of evaluating the objectives which have already become traditional in our schools.

But it is first essential that we should agree upon the amount of time that ought properly to be available for this department of education.

5. TIME ALLOWANCES FOR SOCIAL EDUCATION

1. In order to obtain a basis whereon to establish a series of propositions for a program of educational objectives in the social sciences let us assume that in the six years of the youth's life from twelve to eighteen, the school can claim a total of 8400 hours, to cover every form of general (as opposed to vocational) school education—physical, social and cultural and including both the

"free" or "natural" types (high-grade play, intellectual nurture taken otherwise than by "forcible feeding") and the directed, constrained, and, under some circumstances, "forcible feeding" education.

Of these 8400 hours—or a proportionate part thereof for pupils terminating their general education earlier than the eighteenth birthday—let us assume that educational administrators find themselves ready to recommend that normally, 12 per cent. or, roughly, 1000 hours should be given all forms of social education, including thereunder civic and moral training, instruction in the social sciences, including history and other forms of conscious and purposeful education towards citizenship, in so far as that involves in any degree the group of studies and procedures we have here under consideration. This does not mean that in a school system having flexible curricula every pupil would give 1000 hours to these studies—some might give more, some would probably give less; but, in the process of distributing the time available for general education among the various divisions, such as physical training and instruction, education in English language, English literature, the sciences, fine arts, practical arts, mathematics, mental sciences and foreign language, it might be expected that under normal circumstances one-eighth of all available time of learners would in general be available for the social-science field.

2. What disposition shall we make of our 1000 hours? In the first place, it is probable that when we shall have defined a series of desirable objectives, on the basis of our studies, partly of *B* grade men as they now are, and partly of *B* grade men as society (advised by teachers of social science) would have them in the next generation, we shall find it profitable and desirable to differentiate our ways and means into two classes, according as they belong in

the category of "natural," "free" or "high-grade play" learning, or as they belong in the category of directed "work" learning.

For some areas of economics, ethics, civics and history, it may prove most serviceable to employ those activities which are most nearly instinctive or spontaneous in acquiring the appreciation, insight and ideals that will prove most worth while. To these ends, school self-government, excursions, attendance on prearranged moving-picture exhibitions, and reading of attractively written biographies and historical fiction may prove the best means. But for other areas of social science education it may prove most profitable to employ highly organized and, perhaps, very "dry" materials, such as we now find in text-books on history, economics and civil government. We should, of course, hardly expect to do this because of our devotion to the principle implied in Mr. Dooley's dictum that "It doesn't matter what you teach a boy so long as he doesn't like it." Rather, we would set our learners at this "hard work" learning because of definitely foreseen useful ends to be achieved in the cultural interests or civic capacities of those men and women of the future whom our learners are to become. Presumably, we shall not always have to hold purely on a faith basis our convictions as to these values. It is to be hoped that we can have them so clearly defined that we can readily persuade our pupils, their parents and the world in general that these are real and tangible values, not, as is now too frequently the case, suppositious and, often, mythical ones.

3. It may be assumed, provisionally, (*a*) that the employment of the materials of social science (including history, organized knowledge of social facts and principles, story, fable, historical fiction, historical moving pictures,

etc.) in the education of children under twelve will be in accordance with the principles of "natural" education—that is, satisfaction of the spontaneous instincts for satisfaction of curiosity, intellectual "nurture," etc.; but, that (*b*) in the education of children from twelve to eighteen the use of social science materials will be directed towards the production in quite purposive and definite ways, of certain appreciations, attitudes, understandings and ideals that are believed (and, where possible, known) to bear in important measure upon the good citizenship and personal culture that should be expected of intelligent men and women living in a twentieth-century democracy.

During the earlier childhood period, the controlling purposes as regards social science materials, should probably be intellectual *nurture,* the general satisfaction of the natural instincts looking to the building of a world of experience. Folk-lore, tales, fables, stories of adventure, dramatically portrayed episodes in history, character studies—all these from the field of the past can be woven in with materials interpretive of the child's social environment, and the age in which he lives to the end of helping him feel and know something more of the social *milieu* of which he is a part than he can obtain only from concrete human contacts and associations. Little, if any, of this material can profitably be forced on the learner. Chronological stages and sequences can be given only the slight emphasis indicated by "long ago," "once upon a time," "before you were born," "when Indians lived all round here," "before Christ was born." The "attitudes" to be further developed through the use of this material are the simple virtues, the production of which has already begun in the home and school social environment—appreciation and approval of heroic conduct, sympathy for the

wronged, admiration for devotion and courage, aspiration for service, etc. Fixed and organized knowledge will not be sought as an end of this form of education, but a moderate amount of it may be expected as a by-product—including the beginnings of comprehension of chronological sequences. Naturally, in this area, no complete distinction can be made between materials of social science, and those of literature.

But from twelve to eighteen, while the possibilities of fruitful "natural" learning, to be realized no less from conscious interpretation of social environment than from abundant reading and other apprehension of "attractive" materials must not be ignored, nevertheless, the time has arrived to use some social science materials for socially and culturally "pragmatic" purposes. Certainly, valuable ends of social (civic, ethical, moral) as well as cultural education can be defined which can best be achieved by direct and purposeful use of carefully organized materials chosen from the wealth of sociological (including political, economic, ethical) and historical (including contemporary) knowledge.

4. Let us assume that one large, composite aim of direct education of youths from twelve to eighteen years of age is good citizenship—using that term in a slightly restricted sense, as chiefly indicative of approved kinds and degrees of those habits, understandings, ideals and motives under which we usually place various types of truthfulness, honesty, toleration, respect for and submission to law, respect for voluntarily assumed obligations, sociability, sexual continence, control of anger, and disposition to give a tithe of time and energy to social service not directly commandeered. This composite moral or social aim of education—training for citizenship—is not necessarily the most important aim of education, nor

is it one that can be realized except in part by the procedures customary and appropriate to the direct education of schools. Nevertheless, it is one of very important aims of school education, and certainly schools should assume greater responsibilities than has heretofore been the case in coöperating towards its effective realization.

Now, in education for citizenship, we must first take account, for some purposes, of the potential, and for other purposes of the actual, social (including moral, civic, ethical, humane and socio-religious) by-education of home, church, workshop, press, stage, police-power, street, club and other distinctly socializing agencies.

We should then be able to describe—possibly to delimit—some of the objectives of this social education that under present conditions can only be realized through the directed efforts of schools, or of other agencies, *e.g.,* Boy Scout organizations, camps, boys' clubs, etc.—organized primarily for education. Contributions to realization of these will be developed through the social or civic groupings made possible and the moral behavior required in and about the school—government externally enforced, or self-imposed; the coöperations and competitions of athletics; the clique and gang formations; the social intercourse of the two sexes.

We should be able also to delimit other objectives that can be realized only through the intellectual apprehension in quite definite ways of facts and principles of that social life which is of to-day or which, quite obviously, lies not far ahead. The citizen of to-day, very certainly, is called upon to understand, and in part to affect, the making of our foreign policies towards foreign nations as well as private business policies, in innumerable directions where economic, political, ethical, penal, and educational principles are involved.

Finally, it may be that in some or all of these fields he should have a background of fairly exact historical knowledge. What are some of the problems involved?

6. PROBLEMS OF DEFINING OBJECTIVES

Probably a profitable course for many of us to follow to-day in the effort to define, delimit and organize concrete objectives for the social sciences, including history, in the secondary school would be to state as clearly as practicable the problems involved. In the first instance, many of these could be stated simply as questions. For example:

1. Are the desirable primary purposes of social science education to be found in that field of education which has to do with the formation of the *moral* man, the *social* member of society? And, therefore, are the purposes of social-science study having to do with vocational efficiency and cultured personality to be regarded throughout as secondary, or incidental, at least from the standpoint of publicly supported education?

2. To what extent is it desirable, from the standpoint of comparative educational values, that youths from twelve to eighteen should "learn" (in accordance with the "good" among prevailing standards) the vast range of facts and summarized generalizations now compressed into text-books on history and given concrete effect, as educational demands, in examinations?

3. What is meant by "the unity of history" as that can be apperceived or otherwise realized by young people of average capacity from twelve to fourteen years of age? Having regard to it as a fairly definite conception for any division of history—*e.g.*, world history, Egyptian history, history of Massachusetts, English political his-

tory of the nineteenth century—by what means can it best be realized by or on behalf of young people?

4. For twentieth-century western democracy it is doubtless of much importance that fairly concrete conceptions be established in the minds of the young as to social evolution, social progress, history as development, the rolling up of the social inheritance, the increasing differentiation of society, etc.; how can these best be established —through history as now taught, through the present materials of school history better taught, through a simple concrete sociology as not yet organized, or through special means adapted *ad hoc* to these important objectives?

5. Assuming that the primary purposes of all social education are pragmatic, as directed towards the making of good citizens, why should it not prove practicable and economical almost completely to abandon the extensive study of chronologically organized and inclusive history, and substitute therefor only the study of the historical facts and background of those particular social situations that, for other reasons, might be under study by the learner at any one time?

6. Can we devise a series of concrete objectives in social science, adapted to different ages of pupils, all deserving to be handled by "hard" study methods (as opposed to "high-grade play" methods) and the study of which will result in a really "functioning" knowledge for citizenship?

7. Can we develop as a special objective to which can be given an average of twenty to fifty learning hours yearly the learning of the chronology of momentous events?

8. Can we also develop as a special objective for consideration each year the development of appreciation and some methods of control, of scientific method as

applicable primarily to historical data and records—especially of that which is contemporaneous?

9. To what extent and by what methods can we realize some of the important ends of social education through pursuit of objectives so designed as to permit largest use of "high-grade play" education (interesting reading, moving and other pictures, explorations, lectures, debates, etc.)?

10. Also, to what extent and under what circumstances can we realize valuable cultural ends of social science study as independent objectives of "high-grade play" education?

These problems are capable to an indefinite extent of being further analyzed and added to.

7. SOME SURMISES AND HYPOTHESES

For the sake of provoking discussion, and as a means of expressing one individual's opinion, the writer ventures, but without intentional dogmatism, to suggest below certain possible methods of approaching and solving some of the problems stated in the previous section. It is respectfully suggested that some of the detailed problems here raised are important enough to deserve concerted study on the part of specialists engaged in teaching, or otherwise interested in, the social sciences as means of secondary education.

1. Without doubt, one of the important fields of education and especially that of young people from twelve to eighteen years of age, has as its functional end the establishment of certain habits and attitudes, the development of appreciations and sentiments, the imparting of organized knowledge and the creating of aspirations and ideals which have to do with what we call social conduct, particularly as this affects group relationships. This is a

division of education in large measure distinct from vocational education, from all that cultural education which has to do with the development of æsthetic and intellectual interests of a personal nature, and from physical education. We can otherwise name our objectives as moral, civic, humane, ethical, religious. We may readily assume, on the basis of analyses such as those made by Ross in "Social Control," that as a society comes to include more members, as its activities specialize, and its dependence upon friendliness and coöperation among its members increases the field for social education will increase rather than diminish. This explains contemporary solicitude for better training for citizenship, for (moral) character formation, for study of nations towards ends of mutual understanding, and for greater social insight in general. We may or may not assume that religion as an instrumentality of socialization is less effective than formerly. It would be in accord with sound sociology to assume that in the sphere of socialization the dominance of custom, fixed attitudes of mind, and dogma, tend steadily to yield to rational understandings, and actions on the basis of individual initiative.

Here, then, do we find the chief justification of all forms of education in social science—our functioning objectives must be directed primarily towards social conduct. This is particularly true of all education supported by public funds. The study of history or any other social science for purely cultural reasons or as a high-grade diversion may be permitted to, or encouraged on behalf of, a few; but the study of social science in the interests of democratic citizenship in a highly complex civilization must be directed chiefly towards pragmatic ends—not, of course, in the narrowly utilitarian, but rather in the higher social sense.

We can assume, too, with good reason that the pursuit of these social ends will give, as important and enduring by-products, certain cultural appreciations and interests that will be by no means negligible. Our higher institutions of learning may well seize upon these cultural interests on the part of the relatively few who will manifest them and carry their development very far, particularly as a means of recruiting the number of those who can bring creative insight to the social work of the future.

2. There are many good reasons for believing that the study of history as now organized for our various schools is greatly, if not almost hopelessly, overloaded with materials that, in view of proper functioning standards for social-science education, are of no substantial worth. A critical examination of text-books and of examination questions ought to suffice as convincing evidence in support of this contention. An examination of the intellectual content of educated men and women five years after they have left high school or college would also add convincing evidence as to how little of this material has really laid foundations for permanent insight or appreciation. It is contended that, in spite of intentions to the contrary, text-book makers, teachers of history, writers of outlines and examining boards have been guided almost exclusively in their work by the assumed importance of memorized mastery of the encyclopædic details of history. They have feared to omit anything that from the historian's standpoint might seem important. The resulting condensation of materials as the basis for teaching almost inevitably produces intellectual, non-assimilation, indigestion, apathy, and even antipathy. The existing situation as regards history teaching itself is not susceptible of improvement as long as the underlying aims governing in the organization and pres-

entation of the materials of history control. Only by an almost complete change of front, by the development of a wholly new set of objectives, can we evolve the standards in the light of which it will be possible to organize history teaching in the future towards more definitely functional ends.

3. The writers of history tend inevitably to group the materials which they organize and present, in certain wholes in accordance with principles which appeal to them as economical, forceful and logical. A great event or epoch-centering character—a retreat, a conquest, an exploration, a dynasty, a catastrophic battle, a Cæsar, Charlemagne or Bismarck—may constitute the theme, and all materials are assembled and ranged with a view to making that event or personage clearly intelligible and significant from the standpoint of the writer. Or the evolution of a nation may be made the central theme, contemporaneous events in other nations being introduced by a kind of cross reference when bearing significantly on events in the nation whose history in more or less fullness is being written. A third type of organization found often in text-books and epitomes follows down the years the many strands presented by nations concurrently evolving.

For purposes of reference, and as a means of satisfying the few intellectually choice spirits who develop keen cultural interests in history, as well as, under some circumstances, for purposes of interpretation by mature students, the prevailing type forms in which the materials of history are organized, offer many advantages. The two fundamental elements in this organization obviously are, first, chronology, and second, region. Historic events, of course, happen in time and in place, and the one event can best be related to the other, even if so-called casual relationships are not manifest, by means of relationships

expressed in terms of time and space. On hardly any other considerations, indeed, can we realize for those to whom they are important, the "unities" of history—that orderly reproduction in book, chart and picture for ready comprehension and use of events that happened in some sequential order and also in some definite geographical order.

Now, even for comparatively young learners, there are, without doubt, some knowledges of chronological order, some notions of near and remote, some conceptions of sequence of events, which are essential not only to orderly understanding of facts, but even to mental satisfaction. But, it is contended, the development of a sufciently adequate nption of chronological order and the "unity" of any particular field of history, is something that, made a particular objective, can in any particular grade be very expeditiously and easily realized. But in general, it is probably true that the orderly arrangement in mind of events happening in time or space as well as perception of their interconnection can only follow upon a substantial accumulation of particulars. Hence, probably, the most effective educational procedure would be that which, during each year of the child's progress onward in the social sciences, would give by every graphic means (and for this purpose, diagrams, charts, models, pictures, and even moving pictures can be well utilized) interpreting understanding of high points in history, temporal distances between points, etc. The writer believes that an average of twenty hours of instruction per year devoted to pursuit of this objective would realize ends infinitely more valuable than those now resulting from courses as given.

4. There are a variety of other important objectives to be realized through social-science instruction that doubt-

less should be obtained in the same way. For example, in western twentieth-century democracy, it is doubtless of great importance that young people should grasp with as much concrete illustrated detail as practicable such generalized conceptions as "social evolution," "history of development," "progress," "social advance," "the rolling up of social inheritance," "the increasing differentiation of society," etc. But here again, it is contended that these important conceptions can best be realized by a certain amount of temporary focusing of interest and thought upon the particular elements involved. By study of the growth of type cities like Chicago, Denver, Berlin, Melbourne, Liverpool within the lifetime of men now living, they can come from one point of view very vividly to appreciate certain social transformations. The wastage of Palestine or northern Africa, the increasing travel across the Atlantic, the multiplication of books, the consumption of cloth, the proportions of people receiving the equivalent of a high-school education, the rising standards of living of working people, the diminishing number of countries permitting slavery—all of these and other concrete instances upon which attention can be focused will surely serve much more than the slow idea (or memorized fact) building processes now followed, to give the citizens of day after to-morrow vivid and enduring conception of social change, progress or deterioration, increasing complexity of society, the accumulation of knowledge, etc. In very large measure these are ends to be achieved through the study of an adapted sociology (including under that general term, economics, civics, etc.) with history or historical materials in a subsidiary, but nevertheless important, capacity.

5. We are now confronted by the most fundamental problem of all, namely, as to whether in realizing the ends

of sound social education, we shall not be obliged in large measure to substitute social sciences, exclusive of history, for history as it has been heretofore taught. Furthermore, we shall probably find that we cannot use any of the social sciences as logically organized for purposes of the most effective social education of young people from twelve to eighteen years of age, but shall be obliged to develop new methods of pedagogical organization, dependent in large part upon the formation of large units permitting concentration of attack, and adapted to the maturity and capacities of those being taught. In every case, it would probably be desirable that the learners first familiarize themselves with observed facts and practical interpretations of social phenomena as accessible in the neighborhood and contemporaneously, after which on the basis of secondary materials they could proceed to study similar phenomena at a distance in both time and space.

Take, for example, a topic previously referred to, namely, the migrations of peoples. The facts and effects of some migrations are visible in the immediate vicinity of the home of almost any child in America. A variety of interpretations of these facts and effects can readily be instituted on the basis of observations made in the neighborhood. Then the topic may be pursued outward, first through the study of contemporary happenings—the facts of migration in states at a distance, or in Canada, in South Africa, South America, Italy, Bohemia, Ireland, can all be studied and tentative conclusions of importance formed. From this, it would be natural to proceed to a study of migrations of past times—from Ireland and Germany during the nineteenth century, from England and France during the seventeenth and eighteenth centuries, from northern lands to Mediterranean regions in early centuries of the Christian era, from Arabia and central

Asia at other periods. In this way, the pupil could obtain perspective in this subject in the field of social phenomena, and at the same time build up a body of knowledges, appreciations, insight and perhaps ideals that would be of service in time of civic need. And furthermore, who can deny the possibilities of large intellectual appeal on purely cultural basis in the field thus developed?

Similarly, it should prove possible to treat such large topics as: domestic and household customs; common education; higher education; wars; overseas trade; overland trade; great cities; literature; fine arts; the family; types of government; the average citizen as a factor in government; mechanical means of communicating knowledge (printing, telegraph, etc.); the harnessing of natural forces; advance of natural sciences; the place of woman in society; the struggle against poverty; spreading of culture; causes of national barriers to mutual understanding, etc.

It might prove feasible to group these topics somewhat according to the maturity of the pupils studying them, and also in part according to certain natural groupings of subject-matter, provided this last were not pushed too far. For example, community civics as a major and some history as a minor during the seventh grade; study of contemporary nations with history as a minor, eighth grade; economics of production and transportation during the ninth grade; economics of finance and consumption during the tenth grade; evolution of cultural agencies, eleventh grade; intensive study of democratic government, twelfth grade. These must all be regarded as more or less random suggestions made here in anticipation of the day when we shall very carefully study the pedagogical and administrative aspects of the questions involved.

6. Of the objectives suggested above some would surely be so organized as to be studied only by the methods that have become historically associated with "hard" study—memorization, problem solving, and reorganization for purposes of interpretation of scattered materials—all belonging to what might be called the "work order" of learning. On the other hand, it is clearly necessary that in many cases the first approaches to the teaching of the subject under consideration should be along the lines of general reading, conference, observation, project study, and other means of "free" or "high-grade play" order of learning, wherein, in the most natural way possible, the pupils would gather up and interpret easily accessible materials towards knowledge and appreciation.

7. It may prove highly desirable to organize certain large units of learning exclusively on this "natural learning" plane. For example, there are certain periods of history that might well be apprehended almost wholly through the interested reading of historical fiction or the witnessing of historical plays or moving-picture presentation. Ordinarily, these units would belong rather to the field of cultural education than to that of social education, but not necessarily always. A good book of travel, for instance, might prove an illuminating supplement to the study of economic phenomena in Asia that would be expected to follow a study of economic phenomena in the neighborhood. There are many short stories to-day which are more vividly interpretive of social conditions than are ordinary text-book, or other more formal, means of presentation. Following the pupil's efforts to understand immigration as a locally important phenomenon, a book like one of Steiner's might prove not only attractive reading, but very illuminating as making contributions to social science. Doubtless,

numberless opportunities will yet be developed of utilizing materials and methods of learning of the kind here suggested.

8. At several stages in the progress of the pupil through the social sciences, it would surely prove of importance to isolate out as a special objective the development of scientific method as applied in use of historical records and other data (including especially those of contemporary utterance) and to assist the pupil in the formation of criteria of valuations and criticism that would help him throughout life. The development of appreciation of scientific method would naturally be in some slight degree a by-product of all the social-science work; but this is not sufficient; a focusing of attention upon this as a specific problem should be effected at least three or four times for periods of some weeks in the progress of the pupil from the seventh to the twelfth grades. The materials to be used to this end are, like those of social science in general, superabundant; the difficulty consists in organizing them towards the achieving of valuable specific educational ends. Surely, no one of us can contend that the materials of our history text-books as now organized can be used effectively for this purpose.

9. The use of "high-grade play" (in other chapters called the "beta" method of learning) surely needs further development in education, and especially in the field of history. This important subject has, however, been sufficiently referred to in other sections of this chapter.

10. The development of cultural interests as something distinctively apart from social education, also deserves attention, but, even if our curricula for the upper grades make no special provision for these objectives, it is certain that learners naturally predisposed to establish purely intellectual or æsthetic interests would find suf-

ficient incentive in the by-products of a scheme of social education designed to include only means of realizing socially valuable pragmatic purposes.

8. SOME NEXT STEPS

Granting the presence among educators of some persons of creative ability, who have readjusted their attitudes towards history teaching in the schools along the lines suggested above, what may be regarded as important next steps towards effecting needed changes in school curricula?

Without doubt, the first necessary step is some form of concerted action towards the formulation of detailed methods of procedure, to include concrete statements of aims to be realized (objectives), forms in which these materials may be made available for school purposes, and suggestions as to actual methods of teaching. Here especially are to be found large opportunities for the constructive work of small committees, preferably not more than three at first, who, after formulation of their findings, can submit them for criticism and review to larger groups.

A second step of utmost importance is that of experimental school work, and here it is to be hoped we have promise of assistance in the near future. Even the approved findings of a committee along lines constituting such radical departures as here suggested may be of little effect until put into practice through a series of years in a school devoted to experimentation. That we have made such progress as we have achieved to date without experimental schools is, on the one hand, a tribute to our ingenunity as a people, and is, on the other, explanatory of the persistence of custom and the force of tradition.

CHAPTER XI

THE OBJECTIVES OF SOCIAL EDUCATION

I. NEW PROBLEMS

THE making of good citizens in the broadest sense, that is, of adults who will contribute to the harmony and coöperation needed within the social group, out of plastic childhood with its individualistic and "small group" instincts, has been a task to which societies appear to have addressed themselves since the beginnings of organized human life on earth. Education for citizenship is simply one phase of the complex process of social control. Preparation for citizenship has generally taken place in ways unperceived by the learner, and doubtless often, too, in ways only partially understood by the teacher—as parent, elder, chief, master worker, priest or lawgiver; for it is certain that the customs, dogmas, traditions, institutions and ideals evolved to perpetuate social control have a potency at any given time far beyond that which can be perceived and comprehended by any individual.

But the old ways of fitting for citizenship are not sufficient for the modern world. The citizen of a twentieth-century democracy has responsibilities that are both greater and different from those borne by his forefathers. It seems very probable, indeed, that the spread of aspirations for democracy, accompanied by general social demands for, and approval of, freedom of thought, have rendered of small service much of the old machinery of social control, and have laid upon us the need of inventing and applying new means and methods.

These are the considerations which point to the urgent need, in modern societies, of new and more purposeful methods of education for citizenship. On the one hand we have rapidly developed a social order that is more complex and delicately adjusted than any with which our forefathers were acquainted; and, on the other hand, we have wrought certain fundamental changes in social insight and ideal, the effect of which is greatly to lessen, if not often to nullify, the effectiveness of the historic means and methods of social control which had slowly been shaped through scores of centuries. Simultaneously with the development of new necessities and new demands, we find ourselves obliged to "scrap" much of that long useful machinery, the motive power of which was authority.

Our own country has had, at least from the beginnings of our national life, vivid aspirations for good citizenship. Where specific programs of action have received general approval as means of realizing these apirations, we have given them reasonably good support. The development of public school systems to insure general literacy has been the most conspicuous step in this process. These public schools have become steadily more democratic in their operation; they have assured us a nationally homogeneous speech; and in them a large proportion of our prospective citizenry have gained at least something of historical and geographical perspective.

Recently we have added a few new aims to our programs of citizen making. Our homely common sense has long warned us that the jobless or unemployable man is rarely a tolerable, and never a good, citizen; but only yesterday, historically speaking, did we accept a certain collective social responsibility towards insuring that our youth shall not mature into untrained or otherwise un-

employable men and women. Our present programs for widely distributed opportunities for vocational education have not been designed primarily for civic ends; but the by-products of their operation will unquestionably contribute effects of the greatest importance to good citizenship.

Then, under the pressure of war, we have come to realize the indispensableness of more completely fostering and insuring a common language of communication on the part of those recently accessioned to citizenship. We now intend to enforce those of our laws which require that all reasonable efforts shall be made by the state, and seconded by the elders among our immigrants, to insure that the children of these immigrants shall receive and hold English as their principal language of social and business intercourse.

Thus far have we translated our aspirations into programs of action. But we know that this is not enough. We often point to our high schools with their one million six hundred thousand pupils—the ablest, best circumstanced, and most promising of all our youth—as potential schools of American citizenship. But what, actually, do they now accomplish, worthy of their opportunities? The adolescent learners in these high schools come from good home environments and are predisposed and, in nearly all cases, actually predetermined to be orderly and well-conducted men and women. But what are the actual contributions made through the high-school curriculum to the highest habits, insights, and ideals of good citizenship expected of these potential leaders? Are civic aims explicit or implicit in the mathematical, English language, scientific, foreign language, historical and literary subjects as now standardized in high-school curricula? Can we as yet detect any conscious adjustment of subject

matter or methods of instruction towards the better attainment of civic aims? Our more progessive high schools are offering one or more courses in civics or government, but even the best of these are poorly oriented and show the inevitable abstractions of courses designed primarily to convey information. Painstaking analyses of the structure and functions of government will not take us far. Very exacting studies of contemporary public service problems will not serve if there is no actively coöperating motive. The motivation for the study of thousands of pages of history will be fruitless if, as must necessarily be generally the case, neither pupils nor teachers are able to reinterpret its messages in terms of the social realities of to-day.

We need programs of civic education especially for our young people between twelve and eighteen years of age. We need to have a series of the concrete, specific problems of that civic education elaborated in detail, to the end that experimentation and research may be begun. To this end it is desirable that we should frequently take new bearings in order to determine as specifically as practicable what we mean by good citizenship, and by education for citizenship. Concurrently with these efforts, we must constantly seek to discover, formulate and submit to trial, new programs and methods designed to meet some specific ends in the needed education.

Every true American recognizes that in matters of good citizenship he not only has obligations to meet on his own account, but that he is also in large measure the keeper of his brother's conscience. Few men are good citizens by virtue of the gifts of birth alone; most good citizens are made such by the processes of social control operated consciously or unconsciously within every social group, by the old on the young, the strong on the weak,

the intelligent on the unintelligent, the coöperative on the non-coöperative.

There are a few cardinal propositions relative to citizenship in a twentieth century democracy which are today readily assented to by intelligent men everywhere. We agree, of course, that a worthy citizen must be, first of all, a willing conformist, a faithful team worker, an earnest coöperator. But he must be something more—something that is in a sense almost the reverse of all these. At proper times and places he should refuse to conform, to follow the herd, to uphold the laws. He must initiate, invent, seek followers, undertake new ventures, rebel, even in face of the opposition of his compatriots.

In many fields of social action which we call civic, we can easily see that good will, good intentions, "instincts for righteousness," are assets of primary importance in good citizenship; but it is also no less apparent that these do not carry far into other fields where issues are very complicated, where grounds for honest partisanship are many, and where the disposition to substitute even the highest forms of religious or other emotional guidance, for the cool findings of reason may bring widespread ruin.

Can we not agree, too, that in the modern state there are few intentionally or consciously bad citizens? There are many self-satisfied, ignorant and lazy citizens. There are even more who elect to expend their time, energies and aspirations on the "small groups" which they can easily understand and fit into—families, clubs, parties, towns, vocational unions. But by their own lights these men are not lacking in civic virtues. Subconsciously they have accepted or made for themselves certain principles of division of labor, of "minding their own business," of "setting their own house in order," of standing by their

friends, which serve, in their own minds, to exculpate them when confronted by charges of bad citizenship. These dispositions to revolve, act, and serve solely within the social orbits of local component and constituent groups is probably still produced and justified in large measure by the traditions and vestigial customs surviving into modern democracies from ages of autocratic control from without.

Finally, few of us will deny that the scope, variety and complexity of the issues upon which a citizen, if he be other than a passive conformist, is now called upon to pass, are increasing in almost geometrical ratio. It is not merely in matters of international relations, national finance, and interstate trade that even the well read man finds himself constantly balked by insufficient knowledge and inadequate interpretation; with the best of intentions most of us possess neither time nor ability, apparently, to understand the policies and practices of our parties, our municipalities, or the economic organizations into which we put our labor or invest our savings. In a vague way we have learned from our president that never again can there be a great war in which America will not have vital interests; that economic interdependence among nations, widespread and exacting in the claims it produces, will be hereafter an inescapable condition for all nations; and that somehow we must, for the sake of peace and progress, discover the optimum resultants of "self-determination" on the one hand, and leagued coöperation on the other. But what a prospect of unsolved problems these imperatives open up to the average well-meaning citizen! Is it any wonder that, confronted by current new visions of responsible citizenship, we either resolve to "let George do it," or else cut the Gordian knots with the sword of impulse easily to be found

among our stock of inherited feelings and preconceived ideas?

Perhaps those of us who are actively endeavoring to reconstruct or improve the processes by which citizens are made have not sufficiently realized how brief is the span of time of preparation and how limited are the energies and abilities of those who constitute the rank and file of voters, to say nothing of other citizens. Certainly, any well-meant programs of education for citizenship can only hope to succeed by taking full account of the limiting conditions affecting those whom we seek to educate.

2. SPECIFIC NEEDS OF CIVIC EDUCATION

One of the new problems of education for citizenship, therefore, is that of determining where and to what extent, among our various social classes, there now exist determinable, even if not fully measurable, defects of citizenship.

In New York City there are now nearly 6,000,000 people. These can be separably classified as adults and children; men and women; rich, prosperous and poor; well educated, moderately educated and illiterate; black and white; occupationally skilled and occupationally unskilled; unionized and ununionized; employers and employees; native born and foreign born. All of these, in the broad sense of the term, have been educated for citizenship—educated to be bad citizens, educated to be indifferent citizens, or educated to be good citizens. They have been educated by their homes, their churches, their street associations, their political parties, their newspapers, their contacts with police, theater and philanthropic agencies; and, finally, by the schools they have attended. Much of this education was unintended by

either giver or recipient; most of it was only incidentally purposive; and all of it, substantially, was governed, in aim and method, by but slightly rationalized customs and traditions, where it was not wholly a matter of impulse and chance.

What are the results of this education as found in the citizenry of New York to-day? Surely only a very unreasonable pessimist would say they are all bad. Critical as we may be of the shortcomings of ourselves and especially of our less well-known fellows, we must nevertheless recognize that a large proportion of our six million are trying with some success to observe the laws, to prosecute their own business without interfering disastrously with the business of others, and in a thousand ways to contribute to the general harmony, good will, and prosperity. And on the side of civic initiative the situation might, obviously, be much worse than it is. Our streets, water supply, parks, police, public schools and municipal bookkeeping are not perfect, but neither are they hopelessly bad. Our citizens through their votes and public opinion have somewhat muddlingly, but nevertheless with considerable efficiency, managed the affairs of what is, certainly, an appallingly complex enterprise.

But we cannot remain content with present accomplishments. The citizenship of to-morrow must be better than the citizenship of to-day—for one reason because it will certainly have still more difficult tasks to perform. Towards securing that better citizenship, in so far as we are able to secure it through socially conscious processes, including education, it is desirable and in large measure necessary, that we should evaluate in terms of distinguishable social groups and specific civic virtues and failings, the citizenship which we now have as the result of

the multifarious educative processes of the last fifty years.

For it will be on the basis of the knowledge thus obtained, largely, that we are to frame the policies and specific programs through which the hundreds of thousands of boys and girls now in the public schools of this city will become better qualified than their fathers and mothers to meet civic responsibilities during the years from 1920 to 1950.

Obviously what is called for now is social diagnosis of a more than impressionistic character. Little reliance can hereafter be placed on those "cut and try" proposals for civic (or any other) education which chiefly reflect the philosophical prepossessions of the proposer. In an excessively large amount of contemporary discussion of various phases of education for citizenship there is manifested an unquenchable disposition to offer aspirations instead of programs, to evade the difficulties of analytical thinking by resting serenely on pious generalizations of very equivocal significance. This disposition is not wholly unrelated, be it noted, to certain very passionately urged specific proposals, usually of a negative or repressive order, that are especially apt to be made in times of social crisis.

The first problem, then, is that of ascertaining where and in what respects the citizenship we now have fails to meet social necessities. As respects what civic virtues are our most recent immigrants conspicuously weak? Our college graduates in business? Our best educated women voters? Our unionized craftsmen? Our semi-skilled negro workers? As respects what civic virtues are these groups, or sub-groups within them or other ascertainable social groups or classes, commendably strong? What are the classes or levels or groups in

which strong and worthy civic motives of definite are accompanied by low or deformed civic understanding, also of definable types? Where do we find ample civic intelligence of stated types, corrupted or nullified by low or adverse motives of discernible kinds?

We need the facts called for by these questions as necessary means towards providing more effective programs of civic education in or out of schools. Programs of civic training and instruction (at least those developed since the spread of aspirations for democracy and of demands for freedom of thinking have deprived us of the great old foundation stones of authority) have heretofore rested on the insecure groundwork of *a priori* thinking; the controlling objectives have been ill-defined; and the methods employed necessarily formal and opportunist.

Given necessary resources, it should be easily possible even now to set in motion research that would give us at least partial answers to the questions raised above. Modern social economy and applied psychology have evolved at least some applicable and reliable methods of inquiry. It rests with informed public opinion to provide the needed motive power.

3. EDUCATION OF FOLLOWERS AS EMPLOYERS

The second problem here submitted for your consideration is of a very different nature. If we are to develop more systematic education towards good citizenship than we now have, we shall be obliged to make use, either of existing schools, or of accessory educational agencies like the Boy Scouts, moving pictures, public libraries, Red Cross service, and the like. In the case of students competent and financially able to go to college—and who may be expected in large part to be the leaders of the

future, by virtue both of their superior natural abilities and their prolonged schooling—an almost bewildering variety of courses of instruction in government, economics, and other branches of social science is now available. Opportunities for directed *training* for citizenship may still be wanting, but certainly there is no dearth of means of learning from instruction what are the problems of citizenship.

But in the case of that large majority who never even knock at the doors of the colleges—those millions who are to constitute the rank and file of citizens whose compliance and initiative will often, in spite of the intentions of better instructed leaders, determine whether we are to have a harmonious and progressive democratic social order or a faction-torn chaos of warring social groups—what can be done, during their school years, towards better preparation for citizenship? In some respects present-day schools are improving their own internal conditions of social control, and are thereby making some significant contributions, especially to the passive or conformist virtues of the citizenship of the next generation. The schools of to-day, with the possible exception of those in a few largest cities, are unquestionably at once more democratic and better disciplined, more liberal and more orderly, than were the schools of previous generations. In spite of the outcries of an occasional alarmist, it is certain that the moral life of the American elementary school and even more so of the co-educational high school is to-day on a higher plane than has even been the case, over a considerable time and area, in schools for corresponding classes and ages in the past.

But orderly or even perfect social behavior during school years will not suffice to give us the kind of citizenship we need for the future, any more than will acquaint-

anceship with village topography suffice to guide one in the cosmopolitan wanderings of adult life. What we can well call the *problems* confronting the citizen—questions and issues of economic, political, ethical, municipal, national, international, financial, and sociological nature—are increasingly of a kind that cannot be resolved by well-intentioned compliance and kindly initiative alone. More and more these problems resemble the problems of the physician, the engineer, the banker, and the manufacturer. Their strictly scientific aspects—one is tempted to say their non-humanistic aspects, meaning thereby, of course, their extra-feeling aspects—loom relatively larger all the time. Strict publicity, exact justice, scientifically adjusted means to well foreseen ends—these are to be factors of very large importance in the operation of the new social order.

These considerations bring into relief our second problem. For the millions of our prospective citizens who can profit only by the education to be offered in our elementary and secondary schools it is manifestly impracticable to offer instruction calculated to enable them independently to form adequate judgments or to arrive at sound conclusions in relation to the numberless intricate issues as to which the average citizen, at least on election day, if not oftener, must perforce make decisions. The average man, even when exceptionally well read, now frankly confesses his incapacity, through sheer lack of time and ability, to act with proper intelligence on the questions of municipal, state, national and international politics which daily confront him. He is baffled by their number and complexity and mortified at his own apparent incompetence to deal with them. H. G. Wells, perhaps more successfully than any other recent writer, has assisted us to appreciate how like a legendary adventure

in a monster-haunted wilderness is the quest of the thoughtful man of to-day in his attempts to reach the goal of constructive good citizenship amidst the complexities of the social order now evolving.

What, under these conditions, shall, or what, indeed, can, be the practicable objectives of civic instruction in the schools? We may not rest back on an authoritarian form of procedure, instilling into the hearts and minds of our pupils dogmas and fixed prepossessions. That procedure stands hopelessly condemned as undemocratic and unscientific. On the other hand, the futility of trying to enable the minds of fourteen- or even eighteen-year-old youth to grasp the intricacies of modern social problems is comparable only with the futility of trying to have them understand for working purposes the technical complexities of modern astronomical, mathematical, engineering, medical and architectural problems. And yet, that is just what many a harried or emotionally striving teacher of history or social science is doing to-day in the schools. And in even greater degree that is just what ambitious spokesmen for educators and sometimes for laymen are recommending shall be done in the schools. Some of the requirements implicit in pretentious papers on the "teaching of citizenship" would be ludicrous if they could be crystallized out of the easy language of aspiration in which they are held in solution.

The educational difficulties here indicated are to be resolved, probably, only by the development of certain new types of educational aim or purpose which have hardly appeared as yet in programs of education for citizenship. We must devise means of convincing our youth that their chief responsibilities as active or dynamic citizens must be met, not through their abilities to solve complex problems for themselves, but through their

abilities to employ specialists to solve these problems for them.

To a very large extent we do just that thing now in another field of education, namely the physical. Here our schools aim to prepare children to live healthy lives as adults. They do this in part by instructing the children how to look after themselves in some minor matters of cure and of prevention of ailment; but in much larger and more important measure to consult and abide by the decisions of specialists. In physical education, it is frankly recognized that problems of teeth, tonsils, eyes, ears, arches, digestion, and contagion, are far too difficult for the average individual himself, that these are matters to be delegated to specialists. The effect of this education is that among our better schooled classes we finally produce a well-defined set of attitudes, capacities and powers which can be described in a phrase—*the individual has become a good employer and user of expert service.* The individual has not surrendered his initiative or reduced his judgment to impotence; but he has differentiated them along lines that are most profitable. In other words, he has been trained to carry into this area of life the types of performance—the specialization of services, and exchange of products of service—which have long prevailed where more material relationships have been involved.

For we know that, in fact, the relationships which are suggested here have always prevailed in politics; but we have not yet learned to make proper use of them in our educational programs. The chieftain in clan or tribe was given place and honor because of his ability to do what his followers could not do. To king or priest were attributed powers that ordinary men were not able to exercise. Voting has always been in fact much more a collective employment of specialists than it has been a conscious

evaluating of policies or determination of programs of civic action.

In purposive education for citizenship, we could, therefore, include two principal aims: (*a*) so to shape the individuals appreciations, habits, insights and ideals that to an optimum degree he will conform to the requirements of the various social groups in which he has membership; and (*b*) so to train him that on the dynamic side of his citizenship he will consider himself above everything else an employer and supervisor of expert service in the numberless fields now comprehended within the general area of political action. The second aim would certainly be peculiarly suited to learners of secondary-school age, and no less well suited to adults ambitious more effectively to discharge their responsibilities as citizens.

Many of us have recently been interested in the efforts of women, just admitted to the franchise, to study the political problems upon which they expect to pass judgment at the polls. In most cases, naturally, these women have just been able to proceed far enough to become aware of the complexity and baffling character of the issues involved. However far they are able to penetrate into the mazes of municipal ownership, teachers' salaries, methods of taxation, state park systems, care of dependents and the thousand other technical problems that everywhere confront voters, they will find that in the last analysis courses of action and especially results of action will be determined by the competence and honesty of the specialists delegated to enact legislation or take executive action in these matters. The voter's largest problem, obviously, is to assure just this competence and honesty on the part of his employees, that is, those whom he, in conjunction with others, selects for, and supervises in, the performance of particular forms of public service.

But if, therefore, we aim in education to make our voters good employers of specialist service, we shall be obliged at once to determine what are the powers and capacities that make of us good employers? Under what conditions are you and I good employers of physicians, ministers, plumbers, bankers, novelists, cooks, tailors, editors, and the like? In each of these fields we are all consumers, we must all choose among various offerings, and we are aware that the character of our selections of service and continued patronage exerts a determining influence on the character of the service more extensively hereafter to be rendered.

This is hardly the time or place to analyze the characteristic qualities of the good employer as he now exists in private life; but sooner or later we must do just that in the process of determining the qualities we should seek to produce in that coöperative employer of public service, the voting citizen. Only a few inquiries may be offered here as a basis for further reflection, possibly of eventual research.

Granted that an average man has neither time nor ability to become simultaneously a good tailor, cook, dentist, and preacher, what kinds and degrees of appreciation, knowledge and ideal of tailoring, cooking, dentistry and preaching will be required to make him a reasonably effective employer (in the social as well as in the strictly individualistic sense) of producers in these respective fields? Clearly a man completely without standards and insight here cannot be a good chooser, a wise utilizer. Suppose, having a limited amount of time at our disposal, we were to address ourselves specifically to the task of making a group of adolescent boys or girls good buyers of service, good employers in these four fields, what courses would or should we follow? Herein, I submit, will be found

some of the keys to education for citizenship in the future.

It should be noted that every moderately cultivated adult is to-day the buyer of hundreds of varieties of specialist service—ranging from architecture, music and literature through engineering, medical and mercantile service down to food, clothing and amusements. Possibly we have not yet in our educational theory differentiated *high grade* utilization along these lines as a comprehensive aim of primary importance. Hence we are still easily victimized by the contentions of Utopians that we can only become good utilizers—of paintings, or furniture or newspapers—through having at least attempted to master the arts of the producer in each of these fields.

The analogies—it is here contended that they are parallels—in education for citizenship are plain. The citizen, as stockholder in the commonwealth, must elect directors (very foolishly he often attempts, what stockholders in private corporations never do, namely, to elect technical specialists as well) and in so doing provide for the discharge of literally hundreds of functions, each of an increasingly complicated character. Somewhere and somehow, if he is to discharge his responsibilities well, he must have become so informed as to the requirements of the work to be done, and of the qualities of the men available to do it that he can choose and direct his servants in these fields as well as he selects and directs his dentist, editor, or steamship captain.

Difficult pedagogical problems are doubtless involved in this field of education, but surely the ends in view are far more practicable than those supporting the illusory procedures now so frequently found in our schools in which we expect study of American history, the Constitution of the United States and the complex mechanisms

of municipal government to give the student ability to comprehend and solve the problems upon which he must pass as voter. "Every man his own physician" would not be a more unjustifiable principle of action than that of encouraging each man as a voter to trust his own judgment of complex issues rather than of a specialist whom he freely and intelligently should choose. The pedagogical difficulties involved in educating citizens to appreciate the importance, to understand the methods, and to experience the motives making for such right choice of service are by no means insurmountable, once the goals to be attained are clearly defined.

4. SPECIAL PROBLEMS

Of the making of books and especially of articles on ethical, moral, and civic education there is surely no end. This area is still one of the favorite hunting grounds of the speculative philosopher—in fact it is one of the few wildernesses in which he can still find game. Some day sociology will survey and settle the entire region, and set the wild game off in a preserve; but that time has not come yet.

In the meantime, of course, men must live; and to live they must act; and to act they must think and govern, however crudely; and to think and govern they must be taught, however sketchily and blindly. Hence we find that from the beginning of human group life there has been a great deal of moral and civic education, usually the by-education given by parents and other associates in pursuit of economic, social, religious, and governmental ends. That education, in all past ages, crystallized into endless customs, traditions, taboos, laws, conventions, beliefs, ideals and knowledge; it begot numberless forms of institutions, and forms of social organization. Ross'

"Social Control," Cooley's "Social Process" and Summer's "Folk Ways," to name only three American contributions, give us bewildering panoramas of the complexity of the processes by which man has ever sought to domesticate and civilize himself and his offspring for the group life and more particularly for the life of the larger political and economic groups.

These processes assumed spectacular magnitude when the foundations of modern civilization were laid in the fertile areas of the earth by conquest, when aggressive peoples overwhelmed and undertook to govern passive tillers of the soil. Social control was then built in towering structures on the foundation walls of authority—authority over mind no less than over body. Family life, religious life, government, economic differentiation, education, all built their strongest and most enduring structures on the stones of authority. Some of these structures have survived to the present, at least as gigantic ruins that yet almost defy the modern tools of democracy and free thought.

However much we may criticize the mediæval authoritarian order of social control, we must admit that it developed wonderfully competent-looking mechanisms of moral and civic education, and it is with much regret that educators, parents and influential citizens come to realize that we shall have to "scrap" so much of this machinery —corporal punishment, dogmas, fires of Sheol, military discipline, ceremonials, caste, art-control of emotions, restricted suffrage, "*es ist verboten,*" "the Golden Age behind," and the rest.

In a very real sense, indeed, we shall have to start again building from the bottom the structures of social control, including all means of an educational nature. Instead of building on the solid granite of authority we

must build upon what some feel to be the shifting sands of free thought and free speech. Instead of the right angled and rigid institutions of aristocracy, caste, autocratic government, primogeniture, hierarchical church, changeless constitutions, divinely sanctioned laws, we shall be forced to build apparently amorphous and unstable structures—living and growing bodies, let us hope—embodying as life principles, democracy, universal suffrage, freedom of migration, upward striving proletarianism.

With little light to guide us we must face the problems of civic education for a democracy—in schools where even the boy of twelve "is from Missouri" and "must be shown." Many are the practical problems we must consider together while waiting for that penetrating light which sociologists will bring us one of these days. Two of these problems I wish to submit for consideration. As I see them, they can and should even now be studied by methods essentially experimental in nature. These problems are: (*a*) The determination of the location, extent, and character of the defects and shortages of civic education as that has been directly or indirectly in recent years; and (*b*) determination to the extent to which approved civic qualities of school social groups transform into apparently analogous approvable qualities in adult life.

5. SOCIAL GROUP DIAGNOSIS

We agree in saying we want better civic education. That means that in some of our adult citizens, desirable civic qualities are now insufficiently or wrongly developed. Of what typical groups and as respects what civic qualities is this true? Having answered this question it will be practicable to provide that the generation still plastic in our hands shall be so developed, instructed, or trained,

as far as may be, that the next generation of adult citizens will become more nearly what it should be.

It is evident that, given sufficient resources of service and material means, we are able, even now, to proceed a considerable distance in ascertaining what are the defects or malformations of qualities essential to good citizenship in typical adult groups of to-day. To this end it is essential that we should first analyze and define, qualitatively and quantitatively, as well as we can, important civic qualities in adults. Next we should disentagle certain distinguishable groups of citizens, and elevate their possessions of these qualities.

For example, let us take, in a given community, very unlike groups of citizens, each group of fairly homogeneous composition, as respects race, tradition, education, economic condition, etc. Group M consists of small shopkeepers, thirty to fifty years of age, very poor, with large families, recent immigrants from Russia, with all that such a record implies of tradition, education, etc. Group N consists of prosperous business men of American ancestry, at least high-school education, small families, living in detached houses, reading best newspapers, etc.

Typical citizens of each of these groups will vary greatly as to civic possibilities. As respects any particular civic virtue it is possible for each citizen to be excellent, good, fair, poor or bad. We may call the degree "excellent" the "optimum good," fair as "neutral," and bad as "pessimum bad."

But if we compare, for each group of citizens, one virtue with another we shall find that these have different comparative values. It is important that a class N citizen keep waste off his street in front of his house, but it is much more important that he subscribe to government

loans to his limit in time of war. On the other hand, it is very important that the group M citizen keep his premises and adjacent street clear, and it is of minor importance whether he subscribe his mite to a war loan.

It is evident, therefore, that we need to analyze and describe the important civic virtues for each group, and that we give comparable ratings or measures to both the "optimum good" and "pessimum bad" in each case.

Three well-informed persons, representing somewhat unlike points of view, might, for example, be found to agree that, among a thousand distinguishable civic virtues, the total being arbitrarily weighted at 10,000 units as the optimum for any given group of citizens, the following should be given the indicated standard positive and negative weights for class M and class N citizens respectively:

(*a*) Keeping premises adjacent to streets in clean and orderly condition, class M+100 units and −200 units, class N+20 units and −50 units.

(*b*) Right voting in municipal elections, class M+50 units and −100 units, Class N+200 and −300 units.

(*c*) Subscribing to national loans in war time, class M+100 units and −50 units, class N+200 units and −500 units.

Any adequate rating of these civic virtues requires first, of course, that we translate popular and superficial distinctions and evaluations into reasonably accurate definitions and measurements. What is meant, first, in each case by the civic virtue of keeping ones premises clean and orderly? Second, as compared with all other civic virtues how important is this virtue in class M citizens, and in class N citizens?

Having thus defined and evaluated in terms of com-

parative ratings certain virtues, we could then proceed to rate individuals, M1, M2, M3, etc., and N1, N2, N3, etc. Proceeding thus we could determine characteristic defects or mal-developments in each class.

Based on knowledge thus obtained we could proceed in our schools to provide that the next generation should be and do better. If the class "small shopkeepers" as described are far below desirable grade as respects cleanliness of premises (due presumably to defect or want of proper civic education) then society can proceed to reach in schools or otherwise those who are likely to be the small shopkeepers of the future.

The children of present shopkeepers may reach right standards, of course, owing to the simple fact that they are growing up under American conditions. Their civic by-education from environment may prove sufficient, in which case the school need not exert itself. But if such is not the case the school has obviously a specific aim set for it in educating for citizenship.

To the present writer it would seem that the procedure suggested above is capable of being very extensively developed, and that such development would do much to advance us beyond the stage of mysticism in moral and civic education. It seems especially urgent that all those easy critics of present-day tendencies and effects should be set to the task of indicating in what groups, in what specific respects, and to what degrees good citizenship is now lacking. Measured in terms of their opportunities and influence are college professors better citizens than recent Jewish immigrants as respects: socially helpful voting; initiative in political reform; observance of traffic laws; expressing helpful criticism of high executives, etc.? What are the civic virtues we should expect, after proper education, from unmarried negroes, twenty to thirty

years old, of such grades of ability, that they will probably always be casual laborers? Many other lines of inquiry will occur to students of social education.

6. THE "SPREAD" OF MORAL TRAINING

It is a common assumption that social virtues developed in the school evolve or are almost automatically transferred into the virtues appropriate to citizens in mature life. We have heard much in recent years about "socializing the school," "promoting games for the sake of teaching 'fair play,'" etc. Even superficial analysis and reflection will show us that in many cases we are here the victims of easy acceptance of general terms, of unthinking adhesion to the doctrine of formal discipline, and of easy reliance on the form of reasoning known to logicians as "*post hoc ergo propter hoc.*"

For example, we say we want to teach "coöperation" (whatever that may be) in the school. We set this up as a goal, doubtless, because we see a lack of right forms of coöperating in community and national, as well as in private, economic life. We cannot here stop to differentiate within those complex acts called "coöperation," the respective factors of instinctive sympathy, instinctive toleration, ideal of social action, perception of self-interest, habitual practice or attitude, etc. But it is pertinent to question the validity of the belief that underlying all forms of coöperation are certain important common elements, and especially common elements that can be produced by the educative processes fostered by schools.

One of the most widely distributed and effective forms of coöperation found among adult Americans is that which gives the business corporation. In the schools one of the most widely developed forms is that found in group games. What are the common elements or factors in these

two forms? Does practice of the second pave the way for the first? If a close relationship between the second and the first appears, is that due to selection of naturally sympathetic or coöperating individuals or is it due to accumulated experience of training in coöperating?

Again, one of the most important of civic virtues, we take for granted, is "obedience." Within the school group, as within all other social groups, certain kinds of conformity, submission of will, compliance with rules, restraint of impulse are essential to order and efficiency. By proper procedures of training and instruction we can procure from most individuals for the school group the varieties and degrees of "obedience" essential to the smooth discharge of the regular function of the school. To what extent, if at all, have we thereby established the practice, or even laid the foundations for the practice, of those varieties and degrees of "obedience" essential for adults in armies, in traveling the streets, in business relations? What foundations have we laid for "obedience to abstract or general law," "obedience of the policemen, street-car conductor or head waiter," "obedience of our business superiors," etc.?

Certainly a few carefully analytical studies ought to help us here. What we need especially is something to lessen our disposition to accept aspirations instead of programs, to discourage us from obtaining satisfaction from narcotizing general terms, and to disturb our faiths in the dogmas of formal discipline.

Much could be done by training ourselves to speak somewhat in terms of concrete virtues, rather than always in terms of abstract or very general virtues. For example, if boys of thirteen to sixteen years of age have become habituated in the practice of tipping the hat to lady acquaintances, and if this practice has been made to rest on intelligent perception of the value of this convention, and

if, finally these boys have been stimulated to ideals of approved conduct towards women in general—if these ends have been achieved, then it is probable that the social virtues thus established will persist throughout life. The same conclusion applies to such tangible virtues as: not throwing waste on the streets; turning to the right; neatness of appearance in public; and treating horses and dogs with humane consideration.

But suppose that, by proper procedures, we produce in boys twelve to sixteen years of age composites of concrete virtues which, as required in school and social groups, we can call obedience, patriotism, honesty, industry, coöperation and the like. Is it legitimate, in view of the very abstract character of these words, and the numberless forms of specific acts coming under them in adult life which bear no practical resemblance to the analogous school virtues, to infer from the attitudes and practices achieved in school life that we have provided for the corresponding virtues in adult life? We wonder why some of the best men in private life are capable of gigantic forms of business dishonesty. We wonder why apparently good church members are bad in other social relations. A boy, very obedient in school, may become a very disobedient man in other relations. A soldier in time of peace is incessantly drilled in those forms of obedience which the army prizes; but away from barracks he is so disobedient that hotels and theaters finally exclude all men in uniform.

All of which should mean to us, of course, if we approach the question in duly analytical attitudes that, for practical purposes, there are no such general virtues as obedience, loyalty, industriousness, patriotism, cleanliness, and the like, any more than, for purposes of practical control, there are general qualities of mind that can be described as memory, power of observation, imagination, attention, etc.

As regards certain relationships, the member of a slum gang is exceedingly loyal; in other relationships exceedingly disloyal. The devoted follower of the tribal ethics of "boss rule" is, towards one of his groups, very patriotic and, toward another, the reverse.

It is not essential, of course, that we should cease altogether to use these general terms, or that we should jump to the conclusion that "general virtues" are wholly illusory. But, as practical people, we must cease allowing ourselves to be victimized, as our shallow-thinking political radicals are, by the notion that a whole is like any one of its parts. If, when we had greatly trained the hand to the cunning of needlecraft, we had thereby also trained it for typing, for engraving, and for penmanship; if, when we had trained the eye to observe endings and prefixes and relative locations of words in Latin, we had thereby trained eye and directing mind to keen powers of observation of faces, plants, clouds, and composition of fabrics; if, when we had fully produced "instinctive" or other specific obedience to teachers' commands, we had thereby trained the boy and also the adult he is to be, to obey state laws, national laws, international laws, the justified conventions of domestic life, and the rules of good business, then, indeed, would the tasks of the educator be definite and capable of exact evaluation and performance. But these easy solutions exist only in the domains of superficial thinking, of lazy reasoning. They are used, commonly, to camouflage the necessity for close study and hard work.

Hence my contention that one of the large practical problems of educators to-day is, by process of close analysis and "follow up" study, to determine in just what respects virtues of the school social life become virtues of adult social life.

CHAPTER XII

THE FORMATION OF MORAL CHARACTER

SOCIETY, as it becomes more complex and develops higher standards of individual and social well-being, is always requiring more of its schools—those specialized educational agencies to which are progressively transferred functions of training and instruction heretofore performed incidentally or informally through life itself, apart from the school. During the last ten years all progressive educators have been industriously studying and planning, in response to the insistently voiced demands of many social agencies, the development of vocational schools to supplement the historic forms of general or liberal education which had already been freely developed in public schools. Now that we have achieved substantial results in laying the foundations of public vocational schools, it is probable that the next great question which will, for many years, engage the efforts of the public, and of educators who can think and plan, will be that of the moral education which can produce in individuals the moral character required to meet the needs of a highly developed democracy in the twentieth century.

In facing the problems of what will, for the sake of brevity, be here called character education, it is of the utmost importance that we should give especial attention to the following questions: (*a*) What are present and future urgent needs for better character education than we now get through the home, the church, and other social agencies than the schools? (*b*) What do our public schools now accomplish towards character education?

(*c*) What are some of the possibilities of improved character education in the schools in the near future? (*d*) What are needs of further investigation and research?

(*a*) It is unnecessary here to discuss at length the ever-present need in a progressive democracy of new and advanced types of character education whereby the largest practicable numbers of individuals shall, according to their natural powers and probable responsibilities, be predisposed and fitted, in their conforming behavior as well as in their self-initiated activity, to serve the ends of the higher social well-being. The demands of the war have simply made more clear what many have surmised before, namely, that any people who wish to preserve democracy of social organization, while at the same time becoming more socially efficient in meeting the contingencies of twentieth-century civilization, are confronted by problems of character education of the most difficult kind.

But we do not yet see as clearly as we should that these difficulties lie very largely in the years of advanced childhood and adolescence. Up to ten or twelve years of age the child is, owing to his dependence, the predominance of his instincts of submission and conformity, and the relatively strong place occupied by home and parents in his social environment, still easily controlled by the methods of authority which are as old as the human race itself.

The acute problems of character education for our age and conditions begin when the youth, at ten or twelve years of age, begins to share actively in social life outside the home. Here he finds himself in the atmosphere of independence and free judgment produced by democracy and the scientific spirit of our time. It helps us not at all to say that he is not ready for this new freedom. The simple social fact is that such freedom exists in the social surroundings of at least 95 per cent. of the youth

of America to-day. The democracy of control and free diffusion of knowledge which we cherish for our adults have created for our children, rapidly advancing in power of action and in spirit of initiative, conditions under which the historic controls of unrationalized authority break down. At ten or twelve years of age the girl almost always, and the boy often, are still plastic and responsive to the controls of the only social pressures that greatly affect them—the home, the school, and sometimes the church. Within six or eight years, at most, a majority of the girls and almost all the boys have, during their active waking hours, come to live in a social environment which is little influenced by standards of home, church, or even school in the narrower academic sense. In this environment, in curiously mixed ways, independence of judgment, disregard of authority as such, and liberty of action, prevail and are even cherished, except within, and with reference to, the limited social groups which, under the influence of instinct and custom, and sometimes strong leadership, constitute the central facts of social life for most young persons. For them these six or eight years usually constitute their period of initiation into self-supporting employment, power to live almost completely away from the home, readiness to take part in political movements, and the beginnings of courtship acquaintance with the opposite sex. In times now past, so far as democracies are concerned, these years would have been subject to guidance, shaping, even drastic control. They still are so, largely, under the customs and ideals prevalent in governmental and religious autocracies. But in our democratic societies we have not created the machinery or even discovered the methods whereby we can effectively meet the new conditions which have followed in the wake of the evolution of personal freedom of thought and action.

Here lie the most acute needs and the most pressing problems of character education.

(*b*) But let us not make the mistake of undervaluing or misinterpreting present accomplishments of the schools in character education. It is probable—to the present writer it seems certain—that in the process of making, out of youth from twelve to eighteen years of age, citizens of the type required to carry our civilization, we shall need the aid of special procedures in existing schools and perhaps even special schools apart from these, of types as yet hardly more than faintly foreshadowed in the minds of our educators. But in a very real sense our existing schools do the work now expressly committed to them fairly well as respects both character education and also other forms of education. Upon the American high school, as an educational agency, for example, with its one and one-half million adolescent pupils, there are laid, so far as one can discover from the directions given, and overt acts performed, by controlling authorities, just two types of work and responsibility: first, to teach, in accordance with well-understood standards, certain subjects giving knowledge and skill, such as algebra, history, chemistry, typewriting, English language, civil government, and the like; and, second, while doing this, to insure, by means of the personalities and examples of teachers, machinery of discipline, and some influence exerted on those voluntary activities of the pupils which intimately affect their school life and work, that the school as a little social world shall be itself orderly, harmonious, coöperative, refined, elevating, and, withal, democratic. Do we explicitly ask the school to do any more than this?

Now is it not a fact that, in view of the demands thus explicitly made, and the means provided, the American high school is doing these tasks fairly well? As to

whether the first type of work—the teaching of the subjects as now oriented and defined—is worth doing in the serious spirit now exacted, the present writer entertains some serious doubts. But as to the importance of the second type of work, the maintenance in the school of a good social life, he has no doubts whatever.

Let American teachers, as well as the American people, take no small credit to themselves for the relative excellence of the social life of our schools. Year by year the public exacts that our teachers shall be yet more inspiring in their personalities, clean in their morals, refined in their manner, democratic in their attitudes. The old school vices—bullying, obscenity, destructive mischief, lying, cheating, brutality of teachers, servility of pupils—have been waning for many years. The typical primary school to-day is one to which children go enthusiastically and unafraid and from which they come uncowed, unbrutalized, unroughened. The typical school of the upper grades carries a sad load in its enforced attendance of unadjusted pupils, its unvitalized curriculum, and its unspecialized teaching force; nevertheless, even here, the machinery of control and the personalities of teachers maintain a little society orderly enough for the work that can be done. The typical high school is, of course, attended only by the select of the community; nevertheless, we can well wonder at the orderly and attractive social spirit which prevails. Co-education, sometimes a thorny shrub, does, in spite of all, probably bear many good fruits, especially for a world in which men and women must hereafter live and work in harness together in ways not familiar to earlier generations of others than manual workers. The modern high school has learned wisdom with regard to the voluntary activities of its pupils, and has coöperated in providing some wholesome channels

for their profitable development. The control of conduct in these schools is not undemocratic—at least there is a comparative absence of the arbitrary, militaristic domination of learner by master which has been the characteristic of schools serving times and peoples remote from the ideals of democracy.

(*c*) Our schools, then, we may say in summary, are now reasonably effective agencies of character formation, so far as that character is essential to the social requirements of the school group life itself. But is this any adequate guarantee that the men and women finally produced will be properly socialized for the larger responsibilities of life? It certainly is not. Laymen and educators alike are prone to fall into the error of assuming that the moral ideals, moral insight, or even moral habits, definitely formed under, and in relation to, one social situation will automatically and surely carry over into other different and remote social situations. We have to be reminded many times that a man may be honest in his family and dishonest in business; loyal to club and disloyal to country; industrious in studies and a slacker in wage-earning employment; courteous to his equals and discourteous to his inferiors; a promise-keeper to his close business associates and a promise-breaker in politics; a man of honor with his male colleagues, of dishonor with women.

Sometimes the virtues produced in the social environment of the school carry over into later life and sometimes they do not. In view of our very imperfect knowledge, it is difficult in these matters to separate aspirations and unwarranted assumptions from facts and realities. The wish of the shallow thinker is here often father to his thought. Superficially considered, at least, we should expect the standards of dress and personal tidiness required in high school to carry over into later life because

these are standards largely developed during adolescence in all cases. Habitual forms of behavior established between boys and girls during the high-school period will probably continue operative, for the same reasons, at least as between social equals, for many years. On the other hand, it may well be doubted whether the standards of fair play maintained on the playground can be expected to carry over into adult business and politics where conditions and incitements are necessarily so different. We expect that the boy who has displayed (not necessarily been trained into) industriousness and initiative in the high school will continue to display these qualities in adult life; but the opposite expectation—that the boy lacking in application and industry in school will not improve or change when he comes under the social pressure of working for rewards that he greatly desires—is so often negatived by experience that we can as yet draw no reliable conclusions.

The possibilities of improving the character education of the schools are, therefore, of two kinds. We may in specific respects improve upon the procedures already reasonably good, by which we now make the school an effective little social community towards the service of its own ends; and we can seek to discover ways and means whereby we can use the school life of the pupil to produce the qualities now most required in adult social life and which existing agencies fail adequately to produce.

We are continually at work, of course, in that fitfully experimental spirit which characterizes conscious evolution in education generally, on the improvement of school society. In spite of temporary setbacks, we are increasing the rewards of public school teaching, and therefore the attractiveness of the profession (if the courtesy-title can yet be allowed) to persons, especially unmarried

women, of fine personality and good character. Public demand is steadily enforcing higher standards of social order in the schools—standards representing the very difficult resultants of humane and sympathetic government on the one hand with unoffending behavior on the other. Experiments in establishing some form of self-government for school or classroom, in providing more abundant outlets for surplus physical energy in play and sports, in surrounding school life with the social sedatives of recreational reading and play, in providing through practical arts studies for the orderly expression of workmanship instincts, in forming parents into conferences whereby home and school control can be made mutually to reinforce each other—all these, and scores of other old processes being improved or new ones being invented represent, in their composite form, movements of much magnitude looking to the conscious progressive evolution of the school, as a society functioning for the provision of the instruction and training which is the primary purpose of its existence.

What can the public school do—in any of its grades or types—as conscious character education towards the requirements of the adult society which yet lie far ahead? Let us frankly admit that here we are, if we consider the matter scientifically at all, still in a dark continent. There is no dearth, in this continent, of the blind alleys of superstition, dogma, and easy generalization. The literature of moral education as it is usually called, is overwhelmingly charged with half-baked mysticism and metaphysical speculation. It is doubtful if easy moralizers, theological or other, are destined to give us much safe guidance in our explorations in this field during the next few years. We have much to hope from those whose happy union of optimistic idealism for human society, as it might be, with a

disposition to face social realities frankly as they are, enable them successfully to promote profitable experiments and sane programs of constructive action. From our sociologists, too, and especially those delving deep in social psychology, we have probably much to expect.

For the purposes of a character education that shall function specifically in good adult citizenship, it is not certain, as intimated above, that we have much more to expect from schools for younger children, pious opinion to the contrary notwithstanding. Certainly, our more promising opportunities are in schools dealing with youth from twelve years of age upwards. Here have already been begun some promising developments. Within moderate limits, we believe now that given a mastery of means and methods yet to be worked out, we can enable the youth to obtain some intellectual apprehension of the structure and functions of the community social life in which, a few years hence, he must play his part. By means of social science studies yet to be developed and probably by studies of history pedagogically organized in ways as yet only beginning to be understood, we can give the prospective citizen really vital appreciations (not to be mistaken for habits, knowledge, or ideals, but perhaps involved in the making of these) of the complexity of the social machinery of which he is a part, and of the importance of his playing a worthy rôle therein. In this transition adolescent age, we realize more, perhaps, than did our forebears, the importance of those ideals which, deeply felt and concretely perceived, have the effect often of becoming the incitements of definite and persisting motives. We do not yet know how to produce these ideals as a steady crop; but, having in mind the tremendous influence of rare personalities, of certain types of vital literature and other art, and of new

social groupings like the Boy Scouts and boys' clubs, as these agencies, like variable stars, shine brightly for short seasons, we are slowly developing the conviction that there are yet to be discovered pedagogic ways and means whereby, over long eras and on a large scale, we can realize the valuable results for which we are now indebted to volunteer and, almost of necessity, more or less sporadic effort.

The immediate future seems full of pedagogic promise here, partly because we are seeing the possibilities involved. We suspect that the moving picture has introduced into the lives of our adolescents formative influences of great moment for good or evil towards the standards of adult social behavior. If we but open our eyes, we can ascertain the large part played by the fiction which is, in vast quantities, trivial or substantial, uplifting or debasing, purveyed by newsstand and public library. In fraternity and club our sons and daughters of greatest natural promise form little societies of such solidity that a kind of socialization takes place almost too rapidly, and sometimes with the effect of producing arrest of what would otherwise be promising social development towards usefulness in the larger societies of the world. Teachers are looking with admiration on scouting as a means of assisting adolescents normally to be inducted into the standards of ideal and act which are approved by virile men; especially on the plane of the elemental social life where the adult of necessity plays a strong and visible part in wholesome small-group life. Some educators, forced by circumstances now easily understood, to consider the possibilities, on the one hand, of military training in our public schools, and, on the other, of a period of compulsory army training in young manhood, have easily risen to the conception of an enriched period of com-

pulsory service in a variety of the functions of good citizenship, rather than in armed defense alone.

From these and many other sources, we educators are slowly building up a body of convictions, resolves and partial insights, which will yet serve as the fertile soil out of which workable and effective programs shall spring. We are beginning to see our present high-school curriculums in their true light—as withered and almost unserviceable survivals of ancient practices and mistaken conceptions of educational means. We have ceased to have faith in the traditional organization of our schools for children from twelve to fourteen years of age; and as we proceed to put into effect reorganizations already planned here, we shall undoubtedly open the way for the beginnings of some really vital character education towards the ends of adult life. A thousand signs in the field of adolescent education point the way to new analyses of educational goals, to new developments of means and methods, and to new achievements of results on a plane much higher than that on which we have heretofore worked.

(*d*) Progress in education in the past has come as the result of a slow trial-and-error process, varied occasionally by the minor revolutions wrought by the dynamic powers of some creative thinker or exceptionally forceful executive. Of progress due to scientific inquiry, carefully planned experimentation, or the execution of deliberately matured programs, education has almost none to show as yet. For this condition of affairs we need not necessarily reproach ourselves. It is only within the last couple of centuries that engineering, medicine, war, and agriculture have been, even in part, lifted from the planes of tradition and faith varied by half-conscious evolutions due to the slow accretions of changes resulting from trial-

and-error processes. But education deals with forces and conditions so obscure that even the essential underlying sciences—psychology and sociology—are still in a state of very imperfect development compared with the sciences, such as physics, chemistry, and biology, that are essential in engineering, medicine, war, and agriculture.

Nevertheless, every forward-looking educator eagerly anticipates the day when educational aims and processes can be systematically improved and advanced by methods that can properly be called scientific. He foresees the time when new problems can be so defined and stated that systematic study of their various elements will be possible; when reasonably exact descriptions of purposes, procedures, and findings in the investigation of these problems can be documented and communicated because of the existence in education of a fairly definite and comprehensive technical terminology; when, succeeding to the tentative solution of problems, systematically carried out, and when, once the worth and practicability of new objectives and methods shall have been demonstrated, applications of these valuable results to practice in general can be discriminatingly made and with some assurance as to final outcomes.

We are at present hardly within sight, in any concrete and comprehensive sense, of the vision of a system of education being consciously and scientifically improved. But we have come to the stage of promising beginnings. Where some of the adjuncts of education are concerned—lighting and ventilation of classrooms, cost accounting, and the like—recent developments have been in a measure along scientific lines. The effectiveness of different methods of training or instruction in the more formal of primary-school studies, as well as objectives in at least two—spelling and arithmetic—have recently

been subjected to tests conceived in scientific spirit and so executed as to give large promise of valuable results in practice in the near future. Contemporary efforts to supplement existing public schools of general education by others designed to offer to the rank and file of workers certain specific forms of vocational education have been made at least partially effective by inquiries of a reasonably scientific character.

Towards furthering the extensions and readjustments of education for the formation of moral character, as discussed in this chapter, are there practicable scientific inquiries, well-sustained experiments, systematic applications on a generous scale of objectives and methods of already demonstrated worth? Must the further development of programs in this field await the outcome of endless exchanges of half-metaphysical dialectic, and the blind fumblings of innovators driven by force of external conditions or lured by a faint inner light? Surely, in these days when social consciousness in individuals, and even in many groups, is so wideawake, we can hope for something better. The National Education Association has not ignored its responsibilities and its opportunities in this field heretofore; but assuredly its duty is far from being done as yet.

Under the auspices of the National Education Association, as well as of other educational organizations, can be formed committees created especially for the discovery, analysis, and documentary statement of specific problems of character education which lie ahead of us. Is it not true that there now exists almost a dearth of such work in any scientific sense?

The members of all teachers' organizations can do much to coöperate, by moral encouragement and by discriminating study of findings, with the endowed and other

voluntary agencies now working on the problems involved. In time, if not now, certain of the results of the work of these organizations will have reached the point where their definite application in school programs will be safe and desirable. In such work the coöperative efforts of thousands of educators is to be expected.

From time to time, due to the generosity of philanthropist or enterprise of administrator, experimental work on a large scale will be possible. Educators appreciative of scientific method can encourage such experimentation and quietly urge that it be planned and conducted in accordance with scientific method. They can give such experiments time to produce some definite results instead of indulging sometimes in hasty criticism and rejection, and sometimes in equally hasty adulation and acceptance.

CHAPTER XIII

THE SOCIAL OBJECTIVES OF VOCATIONAL EDUCATION

ALL adults, practically, must work to support themselves and those dependents for whom they are responsible. Hence all adults during all historic times have had vocations—hunting, fishing, fighting, mining, teaching, leading, farming, writing. Since man has only very meagerly developed instincts for systematized productive work, it follows that all competent adult workers have somehow or other been "educated" for the pursuit of their vocations.

Observation of men and women workers easily shows us the prevalence in society, now as well as in the past, of three distinct varieties of education, specifically directed toward producing vocational proficiency. A small proportion—and these usually of the higher ranks—of the workers among us were in large part instructed and trained for their work in vocational schools, that is, agencies whose primary purpose was to give that vocational education. Perhaps 5 per cent. of the 60,000,000 adult workers in the United States to-day—farmers, miners, factory operatives, clerks, housewives, professional men, and the rest—were trained in schools of medicine, law, pharmacy, engineering, stenography, nursing, elementary-school teaching, military leadership, and the like.

Another small number, perhaps 6 per cent. of the total, were trained under the conditions of systematized and responsible apprenticeship. Here belong large pro-

portions of plumbers, printers, stone-cutters, and locomotive engineers; and variable proportions of carpenters, machinists, silversmiths, hatmakers and jewelers.

But nearly 90 per cent. of all the adult workers of America to-day have been the beneficiaries—and the victims—only of what may quite accurately be called "pick-up" vocational education. Nearly all of our factory operatives, miners, farmers, housewives, business men, high-school teachers, sailors, and transport workers began their vocational life somewhere between the ages of twelve and twenty as helpers, job workers, and navvies. They blundered along the trial-and-error roads of experience, sometimes stung by the sarcasm of foreman, sometimes helped by the kindly suggestion and "showing" of fellow-worker.

It is in the social situation here outlined that we must get accurate bearings if we are intelligently to discuss vocational education. It is abundantly capable of demonstration that "pick-up" vocational education is frightfully wasteful of the time, vitality, moral energy, and potential powers of the individual. As a means to general social efficiency it is comparable only with the possibilities of "pick-up" military education in modern war.

Some would seek to restore and to extend apprenticeship vocational education; but, for our day and generation, it would be as well to talk of fighting wars with bows and spears. Apprenticeship, buttressed by numberless laws and ancient customs was, indeed, once a very general means of inducting young workers into the vocational "mysteries" and skills possessed by elder workers. But it has been the method chiefly of handicraft industries, and conspicuously of those which, patterning after production in the family unit, organized naturally on the basis of "man and helper," or fully skilled and partly

skilled, working in pairs, or at most in trios and quartets. Apprenticeship works imperfectly, however, as between father and son, or mother and daughter; it requires more formal relationship. But it fades and dies under factory conditions. It is starved by specialization of production. It degenerates even in the handicraft industries when mobility of labor becomes prevalent and the binding force of indenture is impaired. In rare instances it reëmerges in modern production, as in the case of engine firing and driving, where the necessary pairing of workers, to whom are assigned very different responsibilities, gives naturally to the inferior the desire and possibilities of eventual promotion, and to the friendly superior the pleasure of teaching and advancing his assistant. But apprenticeship as a general means of vocational education holds little promise to the student of modern economic conditions.

It is necessary that we clearly recognize in the contemporary movement for vocational education a half-blind and half-articulate social effort to substitute systematic vocational education for primitive and inferior types—that is, to replace by the direct and purposive process of the vocational school the chaotic and hazardous processes of "pick-up" methods, and to find substitutes for apprenticeship where that is manifestly archaic and unserviceable. The contemporary movement reflects fundamentally a variety of aspirations, not for vocational education in the broadest sense, but for more efficient and less wasteful, more purposeful and less hit-and-miss, kinds than have heretofore prevailed. These aspirations are readily recognized by the social economist as being one of the necessary products of the enlarged and humanized social ideals and insights which have so markedly characterized the social evolution of the first years of the twentieth century.

But the full significance of contemporary social demands and experiments, the goal of which is a general system of public-school vocational education, has been seriously misunderstood by many citizens and educators and not a few well-known writers and publicists. Certain large questions seem constantly to recur in the writings and addresses of men who, it would seem, should long ere this have become better informed. Their attitudes of doubt and opposition can be expressed in a few fundamental questions. Is school vocational education something markedly distinctive from other kinds of school education? Is vocational education in schools generally practicable? Is it "democratic"? Does it contribute to undemocratic industrialism? Should it be supported at public expense?

I. THE DISTINCTIVENESS OF VOCATIONAL EDUCATION

Excessive reliance on the illusory supports of a now discarded faculty psychology and upon the easy generalizations of certain kinds of educational philosophy has been responsible, during the last half-century, for a variety of persistent refusals on the part of many educators and others adequately to conceive education in its analytic, and therefore practical, aspects. The result has been a very considerable mysticism in educational thinking and a deplorable vagueness in much of current discussion. Terminologies have been uncertain and equivocal. Beautiful, even if futile, aspirations have mingled with what has at times seemed deliberate obscurantism. Numberless pages and hours have been devoted to half-metaphysical speculation and dogmatizing about *the* aim of education. The struggle for unitary conceptions has obscured the essentially composite character of the ends or ob-

jectives which educational procedure must necessarily set before itself. Educational writers have too frequently seemed to be in quest of a panacea or philosopher's stone—some simple aim with its attendant method which would serve all the educational needs of an endlessly varied and complex society.

Now, of course, simple, all-inclusive formulas have little practical place in education, any more than they have in medicine, engineering, or government. The actual guiding aims of educational procedure must be no less varied than the varieties of goods—under such inclusive categories as security, health, wealth, knowledge, beauty, sociability, perpetuation of species, and communion with God—which stimulate and control men's efforts in this world. It is true that from time to time we need to agree upon working hypotheses as to what is desired as to the total make-up of the finished product of multifarious educational procedures. We need these hypotheses as a means of determining the relative weights to be assigned to various types of educational objective. But it seems to the present writer largely futile effort to try to derive these hypotheses of ultimate aim or composite objective from *a priori* sources. They will have to be derived inductively, at least until such time as sociology can give us working evaluations of various optimum qualities and types of desirable social membership.

For example, if we study the assemblage of qualities exhibited by some adult of perhaps forty years of age whom several of us approve as a "good all-round" man, we shall find him to embody many classes and specific varieties of qualities that can readily be grouped as literacy, health, vocational proficiency, sociability, moral character, military prowess, intellectual culture, æsthetic

appreciation, and the like. Each and any one of these may be made the determining objective of a specific variety of education for the youth of to-day. There is no educational "simple" or panacea which will produce them all. Naturally, group or social or public effort is, at any given time, devoted chiefly to insuring the high development of those qualities then deemed chiefly valuable to the group—at one time those found in the strong warrior, at another those of the priest, and still another those of the well-disposed and well-informed citizen. In fact, it can be accepted as a general social principle that the collective action of public support and control is directed, at any given time, primarily toward producing those qualities and, more commonly, special degrees of excellence of qualities, which society is believed greatly to need, and toward producing which nature, together with private or individual agencies, is manifestly unequal. Any given degree of education effected through the specialized agency to which the generic term "school" can be applied is manifestly more expensive than the "natural development" forced or induced by the environment, or the "by-education" of home, shop, or playground; but these latter agencies are often not equal to the task of producing the degrees and distributions of the qualities desired by society. Hence, in the last analysis, the institution known as "school"—whether for letters or war, for vocation or spiritual nurture, for physical training or citizenship—is charged with the responsibility of achieving certain ends valuable primarily to the individual or to society which other less expensive agencies cannot meet.

Now the objectives of vocational education are not less, but rather more, distinctive than those of any other particular area of cultural, civic, moral, or physical life. The distinctive procedures which, applied to two men

otherwise equal as respects native endowment, health, culture, and moral character, give us in the one case the competent dentist and in the other the equally competent bookkeeper, bear resemblance neither to each other nor to the procedures by which ability to read, knowledge of the laws of health, or interests in good literature have been produced.

Certain well-known writers oppose provision of schools for vocational education because of the resulting "dualism" of educational purposes. They seem to fail to realize that even non-vocational school education is already a "pluralism" of purposes, and not infrequently a highly involved pluralism at that. Training in singing and instruction in Latin have certainly little in common as to either aim or method. The Japanese youth spends part of his time learning swordsmanship and part mastering the classics; is this not "dualistic" education, if we take note of practical results? Handwriting and the multiplication table, as taught to children, function in various basic ways: but what are the actual functions of music, folk-dancing, and drawing? What is the evidence outside of mystic belief that their results are useful to society?

But when we view the results of all kinds of education synthetically in the "composite efficiency" of the man we approve, we easily discern the important place of the vocational powers. Like the foundation walls of a building, they may not be pretty to look at; but on their strength and durability the possibilities of the superstructure of culture, moral character, and health largely depend. These foundation walls cannot well be built of the same materials or by the same methods as can roofs, floors, and the decorations of porch and parlor. The objectives of vocational education cannot be realized by the same procedures,

or by procedures at all similar, to those which give us love of good literature, reading knowledge of French, or enthusiastic appreciation of nature.

2. THE PRACTICABILITY OF VOCATIONAL EDUCATION THROUGH SCHOOLS

If it could be shown that vocational education through schools is impracticable for a large proportion of vocations, then, certainly, time would be largely wasted in discussing its inclusion in schemes of education for democracies. But of course that is not the case. It is not possible to point to a single vocation of the more than two thousand now followed by American men and women for which direct and positive vocational education is not theoretically practicable, given the necessary working means and conditions. Unfortunately many educators can only think of "schools" in terms of classrooms, textbooks, and other academic paraphernalia. Notwithstanding the numerous examples of very effective schools from the days of Darius and Pericles onward, in which were no blackboards or books, classes or recitations, these educators (to which must be added many laymen) persist in thinking and speaking of "the school" and especially of "the public school" as of substantially one type and method and hence, by inference, one purpose.

The difficulties due here to limitations of imagination can, however, be speedily overcome when once social economists and educators resolutely address themselves to study of specific objectives. Would it be practicable to have a school designed primarily to train men of suitable age to be sailors and deep-sea fishermen? Where should such a "school" be located? What would be its primary equipment? its chief procedures? By similarly facing the practical problems of providing schools de-

signed to produce, respectively, competent barbers, shoe-factory operatives, coal miners, traveling salesmen for automobiles, cotton growers, and the like, it is easy to pass beyond the barriers set by academic tradition and inertia.

3. IS VOCATIONAL EDUCATION DEMOCRATIC?

In America, no less than in France and some of the smaller countries, we write and talk endlessly about democracy and about education toward or for democracy. But of clear-cut sociological analysis and definition of the aspirations, ideals, and provisional programs embraced under those terms we have all too few. Discussion of education for democracy or of democracy in education remains vague, indeterminate, and unproductive if not based upon some clearly indicated assumptions as to first principles and terminology.

It is evident that for practical purposes we must consider democracy under several species. The working aspirations, ideals, and proposals of *political* democracy have become fairly familiar to Americans during the last two centuries. We have also recognized, although we are far from having always approved, certain tendencies toward free intermarriage, free cultural and sociability association, and free allowance of common sumptuary standards that may for the present be called *social* democracy. Religious democracy and democracy of worship we can at least understand. Recently we have heard much of aspirations for *industrial* democracy; but whether these are based upon wholly illusory interpretations of natural process and human psychology or really foreshadow new possibilities of human achievement, none of us can, except in moments when faith rides supreme over reason, feel as yet quite certain.

The philosopher cannot, of course, be very patient of these attempts thus to consider democracy analytically. He visions in men and in societies ideal tendencies to give to each individual, however limited in natural powers or earth-born opportunities, the maximum of freedom, development, and self-realization possible. He grudgingly recognizes limitations imposed by heredity and natural environment; and he flounders often between his aspirations that the individual shall be a willing and perpetually altruistic member of all kinds of social groups, including the state, and his conviction that the ever-active disposition of the group (and especially of the naturally strongest in it) is unduly to control, repress, frustrate, and eventually crush, the individual. Hence, while his interests center largely in those conditions which make for freedom and expansion of the individual nature, he very commonly fails to take due account of those limiting factors which must be primary concerns of the sociologist.

The sociologist cannot, during current decades, escape the necessity of considering public education as both product and causative means of the current prolonged and massive movement for political democracy which, of course, finds its most familiar final manifestations in those social groupings which function as the state. Some of the practical aspirations of this political democracy are now clearly recognized. Its best exponents seek, not the *equality of all individuals in general*—that would be utopian—but *equality in the exercise and enjoyment of those obligations, rights, and privileges which the state, through collective political action, creates and controls.* Hence equality of all before the law; equality of opportunity in choosing those who shall make, interpret, and execute the laws (voting for public servants); equality of opportunity to approve or disapprove proposals of public

policy (voting again); equality of obligations to bear the burdens of taxation and uncompensated public service; and equality of right to share in those opportunities for growth and satisfaction which politically collective action provides—roads, parks, schools, etc.—these have for several centuries past been the actual and practicable objectives, the world over, of political democracy. It would be easy to enumerate many ancillary phases of these—freedom of thought, of speech, of publication, of work, of trade, and of migration—which represent either reactions against previous suppressions of democratic freedom or else conditions for the attainment of the major objectives. The Prince of Wales says to America: "Your aims are as democratic as ours." We are inquisitive to know whether mentally he italicized the word "aims."

Now aspirations for democratic education are, like most other aspirations, very old; but it was not until the nineteenth century that public opinion forced the widespread development in America, France, Scotland, and other countries, of extensive programs of publicly supported and publicly controlled education. The motives underlying this movement were mixed. The good of the state—a safe electorate, literate soldiers, citizens predisposed against crime and vice—was often a controlling ideal. The logical fruition of this ideal is found in Prussia and Japan. But, hardly less frequently, the good of the individual—his religious salvation, his ability to earn a living, his satisfaction of desires for knowledge, his enjoyment of leisure, removal of barriers to office-holding and association with the "educated"—has been the dominant motive. Theoretically, the two tendencies here indicated pull somewhat away from each other, if indeed they do not operate in opposite directions; but, practically, they lead to policies and practices which are the social resultant

that at any one time probably represent the best that a groping people can do for itself.

By the opening of the twentieth century the United States had brought to relatively full fruition our social ideals of democratic education as then understood. Elementary schools had become universal and free, accessible and publicly controlled. Secondary schools of supposedly general education had also become free and reasonably accessible. In the newer states, colleges supported largely by public taxation had become available at small cost to the individual.

Contrasted with schools which had preceded them here or abroad, all of these lower and higher agencies of learning were, indeed, democratic; but evaluated in terms of the ideals of democracy, they yet fell far short. In spite, often, of good intentions to the contrary, their social opportunities were often bestowed according to the natural law of primitive and relatively uncoöperative life, "To them that hath shall be given; and from them that hath not shall be taken away even that which they have." Some kinds of class or caste stratification these schools have indeed tended to reduce; but none the less they have tended to accentuate certain kinds of aristocracy (in the more original meaning of the term), namely, the aristocracies derived from native abilities and favoring economic environment. To the extent which the social principle of "strengthening the strong" and helping chiefly the "most helpable" has induced our ablest to "take on" as much "liberal education" as practicable, it is unlikely that our practices have been seriously amiss; but to the extent that, under the sway of this ideal, we have interpreted "education" as essentially and only those forms of civic and cultural education (plus the great illusion of mental discipline) which collectively make what can properly be called

liberal education, then indeed are we taking from the partially disinherited "even that which they have." American youth of less than average abilities and favoring home environment may, on reaching the years of life from the fourteenth to the twentieth, ask for the bread of further educational opportunity; but, with the only rarest of exceptions, they ask in vain. We have nothing but what is for them the stones of college-preparatory subjects in our high schools and the patent-medicine offerings of commercial courses.

The fundamental source of our social confusion here has been, of course, our refusal to recognize that, for the large majority of our people, when once the years of childhood have been passed and the transition to manhood and womanhood begins, education for vocation becomes a matter of paramount importance. It is certainly such to the individual; and the Great War has assisted us to see that it is also such to the state. Indeed, men of academic prepossessions have themselves long seen the light where the aristocratic vocations have been concerned (called "vocations of leadership" as a palliative to the stirrings of the academic conscience). That able and select youth who could triumphantly finish a four years' general course in academy or high school has for generations found open to him at little cost, and often with the inducement of scholarship grants, vocational schools of theology, law, medicine, engineering, teaching, navigation, war leadership, agricultural direction, pharmacy, dentistry, and accountancy. But to the sons and daughters of the poor and most conspicuously to the meagerly endowed of these, upon whom economic necessities for at least self-support began to bear heavily at fifteen or sixteen years of age, no corresponding opportunities for purposive vocational education have been

available. For a pitiful few philanthropy has made some slight provision; and state schools have been provided for a few thousands who would first qualify through the commitment of felony of sufficient gravity to justify commitment to a reform school. To a few more have been cast the crusts of technical courses in evening, or vaguely oriented day, schools.

In other words, from the standpoint of any adequate conception of the various possible and desirable social aims of education, even our most generously planned schemes have thus far been shamefully undemocratic. They have taxed the weak for the benefit of the strong; they have in many cases helped to the building of new and highly individualistic aristocracies; and they have operated, by various covert influences, to degrade rather than to elevate the self-confidence and working energies of all those to whom nature and social environment have been niggardly of gifts.

These tendencies away from, rather than toward, truly democratic education, have, of course, been in large part inevitable in processes of social evolution as new as those with which we are here concerned. Certainly no blame for existing limitations of ideal or practice need be directed against those leaders who have not had responsibility or opportunity for the analytical and comprehensive study of educational objectives. But what shall be said of those leaders whose chief business in life is the study of education? What, especially, should be said of those who, in the name of democracy of education and of education for democracy, have recently been opposing the development of effective schemes for vocational education?

Fortunately, it can be said of most of them that their hearts are right, however wrong their heads. Of these opponents there are several distinguishable groups. Some

think that the varieties and degrees of general school education now provided contribute as much as a public-school system practicably can toward vocational proficiency. Their contentions have already been answered in this chapter. Another group includes certain able social idealists whose antipathies to the present "industrial system" cause them to view with aversion all educational proposals which seem to give that system recognition and perhaps tentative approval. A third group, including many leaders from among the present administrative staffs of existing public schools, concede, in somewhat vague terms, the importance of vocational objectives in public education, but oppose the provision of necessary means, if that involves separate or specialized vocational schools. Let us consider first the positions held by this last group.

Their theory of educational objectives is best expressed in the *Report on Cardinal Principles of Secondary Education* prepared by the National Education Association's Commission on the Reorganization of Secondary Education. The most important means of insuring democracy of education is that public schools for young people from twelve to eighteen years of age should not be differentiated or separately organized according to the probable economic future of different groups of learners —so one infers from study of the report. Nevertheless, preparation for vocational competency should rank as one of the principal aims of secondary education. The means of all secondary education should be the "comprehensive high school"—the "people's university" (this is not the language but it is clearly the ideal of the report) to which should come for all schooling of less than college grade the rich and the poor, the well-endowed and the poorly-endowed, the representatives of all groups otherwise made

potentially discordant by conditions and traditions of race, religion, economic status, and political inheritance. Daily association, commingling, and coöperation in this comprehensive high school is to insure in adolescents such mutual understanding, toleration, and civic coöperation as will largely prevent social cleavages and class conflicts thereafter. Thus is American society to be democratized.

With the educational ideals here implied surely no good American can quarrel, and least of all the man schooled in contemporary sociology. It is only when we come to consider the practicability of these ideals that men accustomed to think in terms of realities must hesitate and finally pause. The literature of education is replete with ideals that are essentially utopian. They are in fact little more than the aspirations of men who feel deeply but whose disposition or circumstances preclude thinking in terms of realistic conditions and possibilities.

It is submitted that critical examination of the *Cardinal Principles* will prove that such is the case with the educators who framed it. Their vision is admirable, and it is socially sound as regards non-vocational or liberal education. In American society it is of the utmost importance that as long as our young people are required, or can be induced, to remain in schools of non-vocational education—up to the age of fourteen for all, of sixteen for many, of eighteen for a favored minority, and of twenty for a few elect—there should be the least possible differentiation or segregation on account of race, creed, probable economic future, or any other circumstance not strictly relevant to the development of common culture, common standards of good citizenship, and common healthfulness.

But the mistake of the Commission lies in the non-critical assumption that a similar unification of aims is

practicable on behalf of those seeking vocational education. We must all sincerely wish that it were practicable, especially in these days when economic cleavages threaten to divide men into warring groups, as have formerly racial, religious, and political differences. But those of us who have tried to interpret vocational education in terms of objectives corresponding to the realities of modern economic life must sadly confess that vocational education in the "comprehensive high school" is in the main a product of the imagination. We are forced to recognize that in the modern city of even a few thousand inhabitants scores, if not hundreds, of vocations are represented; that the "ages of effective entry" upon them ranges from fifteen to thirty; that in the large majority effective vocational education must consist primarily in that sustained and concentrated "training" which is practicable only on realistic work of a definitely productive character; and that the proper place for such training is only in closest possible conjunction with the commercial agencies which are themselves engaged locally in supplying productive service, or the products of productive service, to the community.

There are a few vocations which can, perhaps, be taught amidst the academic environs of a high school located in the residence district of a city. Possibly bookkeeping, stenography, draughtsmanship, are typical of these. A few others, of which house carpentry and homemaking may be types, are of such a character that technical studies and direction of practical work could be organized in the high school while facilities for educative productive work could be found in the vicinity.

But what about the vocations of sailor, fireman, commission-house clerk, hardware salesman, shoe-factory operative, hotel waitress, barber, street-car motorman,

farm laborer, concrete worker, silversmith, machinist, foundryman, and traveling salesman for woolen goods? Either the Commission denies, by implication, that there exists any social need that vocational preparation for these vocations should be given in schools under public support, or else it has not critically examined the conditions under which such education of an effective nature is practicable.

There prevails, in fact, a fundamental error in regard to the necessary determining conditions of vocational education which is by no means confined to men of academic prepossessions. It consists in regarding vocational education as in some mystic way practicable of achievement through minor modifications of courses and methods in existing schools, whether elementary, high, or collegiate, or of slightly differentiated extensions upward of their essential procedures, instead of being, as it actually must be, rather an extension downward, for educational purposes, of the objectives and conditions of productive work itself. The history of vocational education shows clearly that in modern times hardly any form of school vocational education has escaped the fate of passing through a long period, sometimes of many decades, during which its principal aims and processes have been essentially bookish, academic, impractical, and vocationally non-functional or, at best, only partially functional. Such has certainly been the history of schools of medicine, agricultural and military leadership, and the training of teachers; and such is still, probably, the case with schools of engineering, "business," and home-making. Apart from schools designed to extend or supplement apprenticeship, of which European countries furnish the principal examples, the only type of modern vocational education now known to the writer which has not suffered a long enslavement to academic tradition is that developed since 1850 for the

training of nurses. Here conditions rather than any clearly conceived purpose imposed reasonably sound pedagogic standards from the outset; in fact, programs leaned so far to the practical as to require, like apprenticeship, social safeguarding to save the learner from exploitation.

The obvious conclusion is that, as regards that democracy of education which consists in the free association of learners during working hours, the possibilities are obviously large during the years given to general or liberal education, and small under the conditions of sound vocational education. Vocational education, in the very nature of the case, involves much the same kinds of segregation as the exercise of the vocations themselves. Even where several types of higher vocational schools are brought together, as in a university, there exists little intermingling of students except out of working hours. The demands of the medical school claim the working hours of its students no less than do those of the college of electrical engineering. Even if we should place within one group of juxtaposed buildings vocational schools of shoemaking, carpentry, general farming, and counter salesmanship, we should find practically no association of the various groups of students, except in evenings, holidays, and at other leisure time.

Of course, we are talking here about " real " vocational schools—those that mean business and not dilettantism. The writer knows, of course, of several alleged day vocational schools which have no Saturday session, which are open only 190 days in the year, and whose students cease work in the early afternoon to play baseball. But these give us only travesties of vocational education. They are only slightly modified schools of general education. They may have as their goal the " five-hour day and the five-day week," but they are yet far from seriously reflect-

ing the standards of earnest and competent work that have brought civilization to its present position.

There are, however, certain methods by which vocational schools of a genuine kind can contribute both to the extended culture and to the democratization of their students. Definite objectives for such action are to be found by careful social studies of superior workers among those now influential in any community. That farmer, bricklayer, salesman, housewife, or factory operative whom we most approve is one who so organizes his time and the expenditures of his energy that he gives of these in due proportions respectively to his vocation, his rest, his family, his recreation, his personal culture, and his civic obligations. But the disposition and the understanding required thus to organize life are themselves in large part products of education, school or non-school.

Let the vocational school of farming, then, begin habituating the prospective farmer to a proper disposal of his one hundred and sixty-eight hours weekly. Let it provide first for a working day of eight hours to which shall be given on the whole the freshest of available working energies. Let it then suggest proper recreations (social and intellectual, perhaps, rather than physical, for the farmer) outside of working hours; let it inspire and guide students in forming tastes for good reading, music, social intercourse, and thus lay more secure the cultural foundations which are to enrich the farmer's life.

In the second place, we recognize that each competent worker whom we approve as citizen as well as worker has attained to those special kinds of social insight and civic appreciation which his particular vocation makes possible and significant. Every vocation necessarily develops a large degree of special kinds of social consciousness among its followers—and these are sometimes in line

with the general social well-being, and sometimes at cross purposes with it.

Let no one make the gross error of assuming that the major responsibilities of the citizen are, or can be, taught in connection with vocational training. The efficient medical school now gives its students certain professional appreciations, ideals, and varieties of social insight; but these pertain primarily to the special social responsibilities as to which the medical profession is unique. It is distinctly *not* the province of the medical school to produce that wide range of civic attitudes, ideals, and forms of insight as respects which men are united in the same nation, local community, common form of family life, and moral standards, irrespective of the fact that, occupationally, some are plumbers, some bakers, some lawyers, and some railway operatives.

In connection with preparation for each vocation, therefore, can be taught the group ethics, the desirable social relationships, and obligations, internal and external, of that vocation. Though not all nor even a major portion of desirable civic education (except in the minds of educational mystics), this portion is supremely vital and important. As any individual grows in vocational competency it will usually be found that motive and apperceptiveness for this form of social education will wax rapidly. After all, one of the most real of the centers of each man's life is to be found in his vocation, which, like his family and his homeland, contains endless potentialities for happiness or for unhappiness, according as social adjustment is right or wrong.

4. DEMOCRACY AND "INDUSTRIALISM"

Some of the keenest opponents of certain phases of proposed public vocational education are those who are in

revolt against what is vaguely termed " modern industrialism." Their opposition is, therefore, not directed at all against professional education; only slightly against agricultural and home-making education; and they exhibit no animus against the rather innocuous commercial education which public schools now provide. These opponents have even become tolerant, recently, toward " trade " education in so far as it seems to prepare for the handicraft callings.

But their hostility is strong against all attempts to provide vocational training for the wage-earning callings in highly organized fields of production—manufacturing, mining, railway and steamer transportation, food packing, and the like. These are the economic areas, of course, in which specialized organization, applications of science and invention, corporation control, and use of capital have proceeded farthest. Here develop far-reaching cleavages between " labor " and " capital," between wage-takers on the one side and interest and profit-takers on the other. Here are occurring those revolutionary manifestations which express the blind gropings of millions of dissatisfied workers as well as, doubtless, the schemings and plottings of a limited number of fanatics and scoundrels, for the heaven of " industrial democracy."

It is not practicable in this chapter to examine current aspirations for industrial democracy. There are those who insist that economic industrialism gives labor more democracy than it has ever enjoyed since man emerged from his forest dwellings. But many others see in a highly developed wage system only a modern evolution of slavery. To some, the achievement of industrial democracy is at least as practicable as the achievement of political democracy. To others, production highly developed and economic necessitates kinds of centralization and

specialization which are no more consonant with certain of the aspirations of democracy than are the conditions of military efficiency.

But we are here in the midst of a conflict into which the educator cannot profitably enter. So involved and uncertain, and in the strictest sense so irrelevant, are the issues to education that the educator may well cry, "A plague upon both your houses."

The fact is that it is not primarily the business of the educator to serve either capital or labor, employer or employed, radical or conservative. His responsibilities are primarily directed to the task of fitting the rising generation for the oncoming social order as that can best be understood by him. What will be the probable conditions, standards, requirements, and potentialities for further development of that social order he must be informed by those workers whose primary concern is its study and reconstruction—statemen, social scientists, leaders of partisan movements, and the like.

Before each child of to-day lie some, but only some, economic possibilities. So far as human prophecy can determine, the Sahara Desert and Labrador will not become fertile within the next generation. The habitable and wealth-producing areas of the world will steadily become more crowded. Revolutionary inventions for controlling natural forces are possible but unlikely within the lifetimes of people now living. Standards of living will grow, and desires to maintain them will evoke many sacrifices. Regimentation, specialization, and scientific direction of economic production will doubtless increase. The efficient worker will, except under extraordinary conditions, command more of the products of the service of his fellow, whereby he must live, than the inefficient worker.

These and numberless others like them are the social (or rather economic) objectives which must chiefly determine educational objectives. Only those kinds of education, therefore, will be adequately democratic which work toward these objectives. Those who would use the school system as a means of furthering their partisan economic faiths and beliefs must be warned to take hands off, as America has already warned those who would use the schools in the interests of religious or political propaganda. The youth of America—all that youth, rich and poor, male and female, black and white, gifted and ungifted—under a democratic public-school system, is entitled to reasonable opportunities to prepare for life as it is, or probably will soon be, life physically, life culturally, life socially, and life vocationally. We may, after we have done the day's work in a world of realities, dream of utopias if we will.

5. PUBLIC SUPPORT OF VOCATIONAL EDUCATION

A few years ago it would have been necessary and appropriate to give serious consideration to the question, "Is the support and control of vocational education a proper public function?" Fortunately, general defense of an affirmative reply to this question is not longer necessary. The passage by Congress of what is known as the Smith-Hughes Act by a unanimous vote of both houses once for all affirmed the conviction of the American people that vocational education ranks in social importance equal to any other form and therefore deserves no less the encouragement and sustenance of public support.

Only in one quarter does doubt still abide. We all believe in vocational education—if it is properly refined and diluted. But not a few of us of academic tradition still gag at realistic "shirt sleeves," grimy vocational edu-

cation, very much as our forebears gagged at "dirty" manual occupations in general, leaving them to slaves, bondmen, and "common mechanics." We admire processes by which a girl is taught stenography, but we shrink for contemplating the possibilities of teaching, in suitable vocational schools, men to mine coal, make shoes, pack meats, or fire engines, or girls to make cigarettes, run knitting machines, or wait on hotel tables. Especially are we hostile toward training workers for the highly organized industries. "Let these big industries train their own workers" is our undemocratic and unintelligent refusal. Unthinkingly we here again blindly accept the natural and, for civilized societies, cruel principle, "To them that hath shall be given; and from them that hath not shall be taken away even that which they have." The light of genuine democracy will sometime reach even the most academic (and aristocratic) of us. Generous public support of all forms of vocational education is one of the most democratic of the ideals and aims of our ages.

CHAPTER XIV

THE OBJECTIVES OF THE STUDY OF EDUCATION[1]

OF what high crimes and misdemeanors has the professor of pedagogy been guilty to draw down upon himself the hymn of hate so vigorously chanted by the professor in the January (1916) *Unpopular Review* ("If I Were a College President")? How has this diffident and timorous newcomer into the circles of the orthodox, the "regular" professors, offended? For offended he surely has, and grievously, because the professor who "never carps," would, if he could, "shut the mouths, and vacate the chairs of the professor of pedagogy and all his satellites." With the fierce wrath of the outraged just man, the professor—clearly he is an orthodox, old-guard "regular," among professors—indicts the entire tribe of insolent interlopers who profess to study and teach "pedagogy": "of the innumerable college men with whom I have talked, not one has ever expressed anything but contempt of the department of pedagogy as an educational futility, and abhorrence of it as a meddling nuisance."

These bitter words will doubtless command no little applause in the inner circles of professordom. They seem to express feelings of aversion and hostility too long suppressed in academic circles. The professor of pedagogy, once a suppliant, seems to have become a disturber of the peace, a force to be reckoned with,—perhaps even

[1] This chapter, in substantially its present form, first appeared as an article in the *Unpopular* (now the *Unpartisan*) *Review*, under the title "The Professor of Pedagogy." This fact explains peculiarities of treatment.

a heretic holding open intercourse with the powers of evil. We are curious to find with what offences he is charged, for most of us seem to remember him as a rather unpromising candidate for professorial recognition, and certainly a most unlikely aspirant for professorial influence and power. What has happened lately to make him now so detested and feared—even in "a college almost large enough and quite ancient enough to be called a university"?

Not many years have passed since this camel-like professor of pedagogy began to poke his head into the sacred tent of learning. The faculty of Amherst College, indeed, once in its unsophisticated youth, suggested that he be invited to look in: "But whatever may be thought of these proposals, (*i.e.,* a system of electives), there is one new department of great practical importance which it appears to us should be annexed to the college, as soon as the funds will anyhow permit—we mean the *Science of education.* When it is considered how this lies at the very foundation of all improvement . . . it is truly wonderful to us that so little attention has been bestowed upon the science of mental culture, and that there is not now, and never has been, a single professor of education on this side of the Atlantic." Thus the faculty of Amherst College to the trustees—in 1826. But the trustees were wiser. They held the beast aloof from Amherst, even though he nosed about the canvas of Washington College (in Western Pennsylvania) in 1831, New York University in 1832, Brown University in 1850, Antioch College in 1853, Iowa University in 1873, and Hiram College from 1870 to 1882.

But not until 1879, when President Angell established in Michigan University the first professorship of the Science and Art of Teaching, did the camel finally get headroom in the tent. Thereafter he insinuated or fought

his hateful way inward until he has become (with a slight change of figure) a "huge and wriggling arm of the school octopus, reaching up to the college and sucking it steadily downwards."

Now camels, octopuses and professors of pedagogy are all, doubtless, horrid creatures, but also, like the fleas on David Harum's dog, they may have their uses in the inscrutable economy of an all-wise Providence. The present writer has had several years' experience as a "satellite" professor of pedagogy. He has cherished no illusions regarding his professional standing with the old-line professors of the institutions in which he has served. His "subject" has had nothing of the fine ancient leather flavor of the classical studies; it has made little use of the elaborate equipments of glass and brass used in teaching the sciences; it has possessed few of the endless and bewildering intricacies which make the modern languages such excellent "disciplines"; and as a means of making students "work hard" it has been distinctly inferior to mathematics. Here and there, indeed, a few hardy professors of pedagogy have sought, and sometimes won, fellowship in the ranks of the real professors of history and philosophy, because they have confined themselves to those phases of the history and philosophy of education in which some semblance of scholarly work, according to the currently accepted conventions, has been possible. But in the main these "meddling nuisances" have professed to teach "principles of education," "applied psychology," "genetic psychology," "educational administration," "problems of secondary education," and, weirdest of all "child study"! These subjects, though in the olden days—from 1895 to 1905—they sometimes aroused the curiosity and secured only the half-contemptuous toleration of the orthodox professors, seldom stirred

their vengeful and destructive instincts. Perhaps "the flummery of words" was not sufficiently stripped away! We satellite teachers, at any rate, were in those days suffered to exist, notwithstanding that even professors of psychology and sociology felt at liberty to make us ridiculous. We were certainly not threatened with exile and oblivion; no hymns of hate were composed in our dishonor. Probably none of the real professors thought we did any good; but neither did they attribute to us powers of doing serious harm. We were the fruit of the eccentric notions, or of the weak yieldings to outside pressure, of the president; or else the trustees, responsive to an unaccountable and probably whimsical public demand, had forced us into the institution over the head of the unwilling president. Time could be trusted to dispose of this as of other fads, it was believed.

But, from the standpoint of orthodox professordom of to-day, the professor of pedagogy has evidently turned out to be anything but a temporary and harmless by-product of the evolutionary processes of higher education. He is now "feared as one of the powers behind the throne." His department is "the last and one of the most noxious of the evils flowing from our quantitative standards." It is entrenched behind "the tyranny of school boards and town councils acting through regents and president." If it could be cut off, "the schools themselves being then forced to follow the higher institution, instead of trying to lead, would be benefited as much as the college." So deep-seated, indeed, is the evil that "the very mention of such radical measures" (for its correction) costs the professor his "promotion." In other words, the camel now seems to have his whole ill-smelling bulk within the tent, to the complete discomfort of the original tenant, whose eviction from his warm quarters seems, in turn, to be

threatened. (Surely—horrid thought—the professor of pedagogy did not obtain the presidency!)

But the judicious will feel that the professor who has failed of deserved promotion, because he forcibly expressed his strong convictions, can hardly do justice to the professor of pedagogy. The defendant must surely have a case that deserves at least a hearing. College departments of pedagogy can hardly be said to be excessively popular outside of college walls, and clearly they are anything but popular inside those walls. Nevertheless, since 1879 they have grown very rapidly in scope of activity and in influence. The professors directing these departments have sometimes been visionaries, and more often they have been too youthful and too much given to imagining, saying, and doing—but especially saying—unwise things. But on the whole, these men have been enthusiasts, much interested in helping the college to render greater service to the public. Rarely have departments of pedagogy been established as a result of any definite demand arising from within the college itself; rather they have developed in response to pressure from without—pressure which has been exerted by parents, by interested citizens, and especially by school authorities. The voices of professors of education have been heard with approval, not so much because of the message conveyed—which, in truth, has often been meager enough—but because they seemed to bear promise that at last the college, from its aristocratic mansion on the hilltop, was sending a few friendly visitors to inquire as to the well-being of the schools—the schools of the people—which had heretofore, indeed, been forced "to follow the higher institution."

It has become the business of the professor of pedagogy to study and to teach the facts about education—the

needs for it, the aims set for it, the means and methods employed in it, and the available evaluations of its results. At first he taught of education at a distance—the history of education; and in the cloudlands of speculation about "principles"—the philosophy (sometimes only the metaphysics) of education. Then, responding simultaneously to demands from without college walls and to his own quickened conscience, he began to teach of education as one of the great realities of to-day, as something to be found everywhere, as something which should be the concern of all well-informed men, and as something quite capable of being studied and improved in accordance with scientific methods. The purposes of the schools of to-day, the powers and the frailties of their learners, the instruments and practices of teaching, the tangible results of the instruction and training as now variously given—all these became finally the objects of the study, and the subjects of the teaching, of the professor of pedagogy. A new and unexplored world of human action opened to him for study, interpretation and research. In this world, indeed, the purposeful direction and control of human energy, as manifested in feeling and intelligence, had long prevailed through processes described as education; but this education was still carried on in accordance with ancient customs and traditions analogous to those which constituted the philosophy and practice of mediæval medicine. He saw that the time must soon come when the immense mass of faiths, beliefs, traditions, superstitions, customs, and habits which now serve as the foundations and framework of educational practice would all have to undergo examination in the light of scientific methods, and when there would have to be substituted for many of these products of an age of faith, principles based upon tested knowledge, itself the product of objective study and defi-

nite experimentation. He now saw education in its countless aspects as hitherto only a few seers—the Rousseaus and Pestalozzis—had seen it. Visions came fast, as his eyes were opened, and, like other youthful pioneers in new fields, he spoke easily and, perhaps, too often, of his visions.

But his newly acquired and still very imperfect clairvoyance was destined soon to produce trouble wherever ancient methods of teaching and learning persisted. He could not but perceive that the secondary school, for example, is, in many of its phases, still existing in its age of faith. The aims controlling the selection and organization of its studies are based mainly upon ancient or accidentally formed beliefs, its methods of teaching are in large part simply old customs, and its heart is still set on magic, miracles, and faith healing. Tradition, dogma and mystic generalization constitute the bulk of its pedagogical learning, and blind adherence to ancient habit, tempered by occasional changes in fashion, determine, in the main, its practice—and in their adherence to their faiths and superstitions, the conservatives in secondary education receive no little support and comfort from the devotees of tradition in our colleges.

The professor of pedagogy was so situated that he was forced to study existing secondary schools, and to reflect upon the significance of their stated aims, their habitual practices, their alleged achievements. He saw that their teachers were usually college graduates—whose education had sometimes included one or more prescribed courses in pedagogy—but who had become high-school teachers with no adequate professional training. These young graduates seldom learned to teach until they had spoiled several classes in the process of acquiring experience with,

and some knowledge of, adolescent youths. They were almost always bunglers at first, not necessarily because of any marked deficiency in knowledge of the *subjects* they tried to teach, but conspicuously because of lack of knowledge of the *objects* of such teaching—including not only the pupils to be taught, but also the powers and qualities expected to be produced in them through such teaching. It usually took these bunglers several years to learn, by painful personal experience, the simplest elements of the arts of teaching.

All this the professor of pedagogy saw—could not help seeing; and all the time the orthodox professors of the old-line subjects—the classical languages, mathematics, history, physics, chemistry, English, French, German—were grinding out their daily grist of lectures and lessons for those who were soon to be teachers, and always quite oblivious to the existence of high-school boys and girls, indifferent to the social significance of multiplying high schools, ignoring the endless failures of young high-school teachers in the field, and contemptuously hostile to all suggestions that the liberal-arts college, expected by the public to turn out properly qualified high-school teachers, was not only doing its freely accepted task very badly, but was blind to the larger present opportunities for increasing the general usefulness of the college itself.

It became clear that, in spite of its refusal to recognize this fact, the largest single definable function of the so-called liberal-arts college, as understood by the public, was the preparation of teachers for secondary schools. In recent years, when in America the attendance on public high schools alone has passed the million mark, probably not fewer than five thousand new high-school teachers are annually required. Public sentiment demands that

these shall be college graduates. The colleges would be greatly distressed if their graduates were not freely accepted for these positions. Nevertheless, college faculties, strongly attached to traditions of general or liberal education, have neglected to face their responsibilities as to the adequate professional equipment of those of their students who will probably become teachers. To a very serious extent, indeed, they have opposed efforts to insure that even a small amount of such special training shall be given in a definite and effective way.

The development of departments of education in college and university not only produced agencies charged with the responsibility of studying these matters and proposing remedies for defects recognized, but, equally important, these became centers of positive contact with the public-school system. The long-ignored complaints of school authorities henceforth received here sympathetic consideration. In steadily increasing measure the department of education has been looked to as the responsible agency of the college in recommending teachers; and it has been obliged to strive to live up to the responsibilities of this important position. It has been forced to transmit the pressure from outside the college—a pressure for the better equipment of teachers—to the various departments, few of which welcomed the demands thus made upon them for better work or for different work. The professor of pedagogy, insistently repeating and interpreting the needs of the public-school system, has thus naturally become the target for abuse as a "meddling nuisance," the promoter of "educational futilities."

Is it likely that the professor of pedagogy will in the near future become, also, a critic of college courses and college teaching, especially as these exist in the non-pro-

fessional colleges? There are indications that this is probable. The liberal-arts college is not at present giving satisfaction to its students, to its faculty, or to the public. It is undoubtedly approaching a period of prolonged self-examination. It is frequently asserted that students in the more prosperous and popular of these colleges do not generally take their work seriously. Only a few of them seem to give to the "enterprise of learning" the enthusiasm and devotion that their fellows in large numbers give to athletics and other student activities. Rarely is an instructor popular because of the brilliant and successful character of his teaching. The public does not yet appear to appreciate the (alleged) actual purposes of the liberal education for the giving of which the non-professional college is supposed to exist. Practical men constantly insist on evaluating the results of college education in terms of success in business—in wage-earning. The prolonged efforts of college authorities to impress upon the public an understanding of the supposed purposes and assumed values of liberal education, have indeed borne very little and very poor fruit, when journalists, professional men, business leaders, and even educators themselves are willing seriously to debate the question, "Does a college education pay (in terms of dollars and cents)?"

The professor of pedagogy cannot but see that the actual educational aims of the liberal-arts college are as yet no less lacking in definite and scientific formulation than are those of the secondary school. Traditional dogmas as to educational values, the loose generalizations of a now discredited system of speculative psychology, and the inertia of custom explain in large part the persistence and "protected" character of many of the courses offered. Latin, French, German, mathematics, logic, phys-

ics—in fact, almost the entire range of studies prescribed or recommended in the more conservative colleges, are approved as elements in liberal education on the alleged grounds that they possess an unequalled culture content or provide mental training of an important and necessary character, and which presumably cannot otherwise be obtained. But these subjects are usually so taught as to evoke little vital self-activity on the part of students. Most of the instructors have, indeed, never given serious consideration, let alone study, to various possible methods of so organizing and presenting materials as to render their teaching more effective. Their methods of teaching are obviously patterned after those of their own former teachers—often a case of the blind leading the blind. There is no conclusive evidence that the traditional college subjects, thus taught, possess any unusual educational values. It is probable, indeed, that they are pursued in a spirit so perfunctory as quite to deprive them of the values which they might otherwise possess, and which may even now be found in other studies pursued with genuine interest because the resulting knowledge promises to be of some real value to the learner.

To the professor of pedagogy the improvement of college teaching will doubtless soon present itself as a vital and important new problem. But the approach to the study of this problem and of the numerous special related problems will obviously call into question the whole scheme of aims, immediate and remote, which now control, or are asserted to control, in college education. The concrete and immediate values supposed to be realized through certain studies will inevitably be made the subject of scientific inquiry. The ultimate values alleged to be realized through college courses—described in terms of

loose, vague and abstract generalization, such as "general culture," "training for leadership," "education for service," "mental training," "the efficient life," and the like—are certainly much to be desired if they are to be found this side of Utopia. But the experience of the professor of pedagogy with the theories and practices of education on levels below the college has made him suspicious of aims stated as "omnibus generalizations." He tends to inquire after specifications, to search for tangible results.

He finds, for example, that orthodox professors often condemn the elective system. They usually agree that "this extra work for the faculty (in adjusting the infinite intricacies produced by a wide range of electives) might be abolished by the straightforward and wholesome expedient of selecting the studies which really possess the quality of educating, and prescribing these for one and all alike." But the staggering question always encountered is: "Which are these studies?" Are they Latin, Greek and mathematics, or are they economics, government, and American history? Shall we prescribe French and German and omit biology, and must we discard sociology in favor of physics and chemistry? Shall English literature from Chaucer to Milton be included, and American literature including the short story be omitted? Must young women students "take" mediæval history and forego "Problems of Modern Social Economy"? In some college curricula eugenics and child study are even now actually in competition with Anglo-Saxon and seventeenth-century drama—which should give way? The fact is clear that the elective system has spread, not because any considerable number of professors have approved it, but because many preferred it to a greater

possible evil—the reduction or elimination of their own cherished courses; and this condition has threatened the defenders of the ancient subjects no less than it has the expounders of sociology, Spanish, the modern drama, and economic biology.

It is inevitably true that "the enormous range of subjects taught in our colleges . . . means endless details of management and the adjustment of infinite intricacies." And clearly "this extra work for the faculty might be abolished by the straightforward and wholesome expedient of selecting the studies which really possess the quality of educating, and prescribing these for one and all alike" (to repeat a choice quotation from the professor). But to take this position involves the begging of several questions: What is the college for? What is the faculty for? How important, comparatively, are the ease and comfort of the faculty and the needs of students? And, above all, who is to decide as to the studies which really "possess the quality of educating" (for a life of leadership in a modern democracy, we must presume, since this is so often the burden of professorial eulogies of the college)? It may be that, after all, we shall have to call upon the professor of pedagogy to answer these questions, and to lift the college out of the slough of despond into which, even according to its best friends, it seems to have fallen.

Is it not inevitable, then, that the professor of pedagogy, however unprepared he may be for the huge problems involved, must turn to the field of college teaching as a promising one, first for research and later for constructive (or destructive) action? And is it not certain that his invasion of this field will produce the same fears and arouse the same angry resentments that followed, in

the medical world, the work of Pasteur and Lister, and in theology the probings of the authors of the higher criticism? But, on the other hand, does he not typify, however crudely, the introduction of the scientific spirit into education? Must not the conservatives learn to adopt and supply some of his methods in defence of their own preconceptions and customs? In fact, is it not probable that the professor himself, had he been given the presidency, would have set on foot a series of vigorous inquiries, and have made a number of definite proposals the outcome of which doubtless would have been the same temperately progressive programs as have been recommended by President Meiklejohn, whose fingers, to those who know him, seem by no means "nerveless"? [2]

[2] Referring to the charge, in "the professor's" article, that President Meiklejohn (of Amherst College) had failed to grasp the opportunity of making Amherst a "classical" college.

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